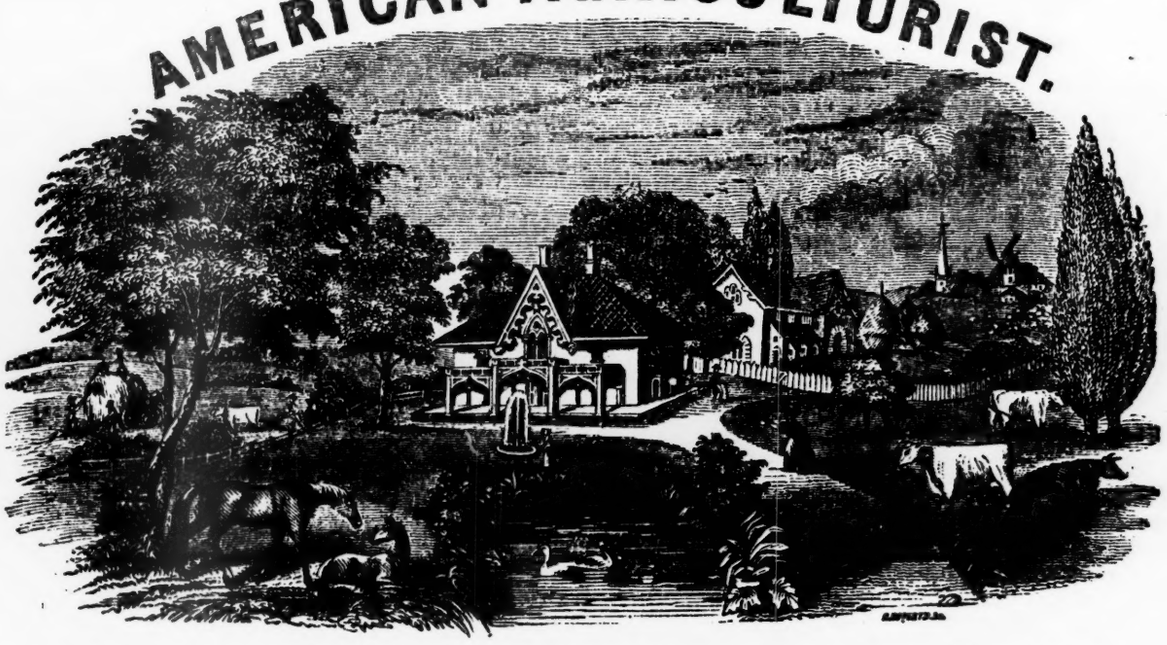
AMERICAN AGRICULTURIST.



Agriculture is the most healthful, the most useful, and the most noble employment of man.—WASHINGTON.

VOL. V. NEW YORK, JANUARY, 1846. NO. I.

A. B. ALLEN, Editor. SAXTON & MILES, Publishers, 205 Broadway.

TO SUBSCRIBERS.

WE send this number of our paper to all subscribers to the last volume, hoping that they may find it agreeable to renew their subscriptions, and continue with us another year. Such as do not wish the Agriculturist continued, will please return this number *immediately, and unmutilated,* with the name and Post-office address on the *wrapper* (not on the paper), when it will be stopped. Recollect that the subscription is cash in advance, and we wish expressly that none be forwarded by Post-office drafts, it is so troublesome to collect them. The money may, in all cases, be enclosed in a letter, and sent direct to the publishers, at their risk. The terms remain unaltered. Single copies, One Dollar; three copies for Two Dollars; eight copies for Five Dollars. Agricultural Societies, Clubs, and agents, supplied on the most liberal terms. The work being stereotyped, back volumes, handsomely and uniformly bound, can at all times be had. These now form one of the best Encyclopædias on American agriculture to be found, and ought to be in every library. No money can be better spent than in devoting it to the purchase of this excellent work. The farmer who does not possess it is without his best friend. Many refuse to take an agricultural paper on the ground that they cannot afford it, when, at the same time, they annually spend dollars in the most useless or worthless things imaginable. We have often heard it said, that a single article in our paper has saved the reader five or ten times its subscription price. How beneficial, then, must it be in the aggregate to the farmers of the country! England and other foreign countries are making rapid strides in the arts of the husbandman, and they owe the advantages of their progress mainly to their agricultural periodicals

TO EXCHANGE PAPERS.

OUR exchanges will please do us the favor of noticing the commencement of a new volume, with its character and terms; and also, if convenient, copy these as they appear on the last page. We shall be obliged if editors and post-masters generally, will act as agents, or get some responsible person to do so. Our paper does not conflict at all with theirs, and by exerting their influence in our behalf, they may greatly subserve the best interests of the country, and assist in ameliorating the condition of the farmer. By lightening his toil, and teaching him how to grow a larger product per acre, with the same capital and labor bestowed, millions are added to the productive wealth of the country, society is advanced, and comfort and happiness frequently produced, where none now exist. We trust that none will be found slack in their efforts, and that renewed exertions will be made by the friends of agriculture to carry this journal to every farmer's door in the land.

TO THE LEGISLATURE.

AT the last session of the Legislature, a bill was introduced and attempted to be passed in the House, directing every County Superintendent of Common Schools in the State, to subscribe for as many copies of the Albany Cultivator as there were School Districts in their counties—the subscription and postage to be paid by the State, out of the School fund. This bill would have given upwards of $12,000 to a *single* agricultural paper! at the same time that there were FOUR others in the State equally meritorious—equally valuable to the farming community—and equally deserving public patronage. We are of opinion that the Legislature could not pass a wiser and more beneficial act than such as should disseminate agricultural journals

among the Common Schools of the State; but we hope if anything of the kind is attempted at the present Session, for ONE *particular* journal, it may meet with the marked rebuff of last year. We are opposed to exclusive privileges—they are contrary to the genius of our Republic. We advocate the principle that all who are deserving shall share equally the bounty of the State; and we trust that this principle will be kept in view by the highly intelligent and honorable body composing the Legislature this Session.

THE ALPACA.

We wish we possessed one-tenth the wealth of many a man we could name in this country, for one of the first things we would do with a very small portion of it, would be to import a few Alpacas, and naturalize them here for the benefit of the agricultural community. We wrote a little article on this subject in our April number, last year, and we intend to continue inserting others till we can influence some one, who has sufficient patriotism, to make an importation of these most beautiful and valuable animals. It pains us, absolutely, to look around and see the worthless objects on which so much money is spent in every quarter of the United States; and yet one might solicit for years, and it is doubtful whether so small a sum as one thousand dollars could be raised for the worthy purpose of importing what might ultimately benefit the country untold millions. This does not arise from a want of liberality on the part of our citizens, but unfortunately from improper *education*. Yes; we mean *education* in its enlarged sense—an education which teaches people to do with their abundant means what is for the advantage of their fellow citizens—aye, and for the world, instead of spending them so exclusively for the gratification of their own immediate vanity, pride, and luxury. Is there not a merchant among the millionaires of this great city, who will stand up as Mr. W. Dawson did—honored be his name—at the late meeting of the British Association for the advancement of science, and say:

"It is now six years since I first joined this society for a little recreation or relaxation from the trials of 30 years close application to commercial life; and at Birmingham I brought a subject before its notice, which received its countenance in a special manner. I there declared the object of that paper, which was to induce our various manufacturers to exercise their ingenuity in discovering means to consume a wool of a silken texture (as can be seen retailing) in a manufactured state, and also to prepare our landed gentry and farmers to naturalize the animal called the "Alpaca"—a species of sheep that eat what the cow, the horse, the common sheep, &c., reject. The manufactures have succeeded beyond my most sanguine expectation, and the naturalization also: the former has created a national wealth of £3,000,000 to £5,000,000 per annum; the latter is progressing rapidly. I have proved these mountain-rangers can be domiciled in our own country, though brought from *beyond* the Andes Mountains in Peru. [How much more easily then would they do this in the United States—a climate similar to their own!] I have tried the experiment in my own lands, on the west coast of Ireland, in the wildest districts of the county of Kerry; and already a company is on the tapis to bring over ten thousand of these animals for the national good. As the race is almost extinct in Peru, it is desirable to bring them to Europe; their wool approaching silk, and their flesh being improved by English air and pasture. *Our Sovereign and Prince Albert* are now wearing royal robes manufactured from the wool of these animals, bred in the Royal Park, at Windsor. *In ten years these animals will add £20,000,000 per annum to the national wealth!*"

CISTERNS.

Many farmers might conveniently, and with great advantage, furnish themselves economically with an extensive and permanent supply of water, when otherwise deficient, by constructing cisterns. Where they have compact clay land, no further preparation is necessary for ordinary use for stock, than to excavate to a sufficient size; and to keep up the banks on every side, place two frames of single joice around it near the top and bottom, between which and the banks, heavy boards or plank may be set in an upright position, reaching from top to bottom. The earth keeps them in place on one side, and the joice prevents them falling in. They require to be only tight enough to prevent the clay from washing in. No appreciable quantity of water will escape from the sides or bottom. We have had such an one for years without repairs or any material wasting of water. This should be made near the buildings; and the rains, carefully conducted by the eaves-troughs and pipes from an extensive range, will afford an ample supply. For household purposes, one should be made with more care and expense, and so constructed as to afford pure filtered water at all times. These may be formed in various ways, and of different materials, stone, brick, or even wood; though the two former are preferable. They should be permanently divided into two apartments, one to receive the water, and another to be used as a reservoir to contain such as is ready for use. Alternate layers of gravel, sand, and charcoal at the bottom of the first, and sand and gravel in the last, are sufficient; the water being allowed to escape from the bottom of the former into the latter, through the several layers mentioned, will be rendered perfectly free from all impurities, and furnishes the purest water in the world. Some who are particularly choice in preparing their water, make use of filtering stones, but this is not essential to securing a choice article. Occasional cleaning may be necessary, and the substitution of new materials will at all times keep them sweet.

Clearing Swamps and Marshes.

—The winter is decidedly the best time to clear the brush and timber from the swamps and marshes, in order to let the sun in to dry up the water, and prepare the way for ditching, much of which may also be done now to advantage. Labor is cheap and plenty at this season of the year, and it is the duty of every one, who is able, to give employment to the needy, and get rid of those unsightly rookeries which are of no other use than to harbor the blackbirds that pull up the corn. These swamps are usually the richest land on the farm, and will pay the greatest interest of any when drained and cropped.

THE STABLE.—No. 6.

In our former num[illegible]ve treated of the arrangement of stables as [illegible]ls the stalls, their division, size, &c.; and their [illegible]roper lighting and ventilation. In this we shall treat of the methods of fastening the horse in the stable. It is very important that a horse, and especially one not worked any or but little, and one worked very much, should be so fastened as to permit full repose. A horse moderately worked, is not fatigued by idleness (the most trying fatigue), nor by over-work. He rests with less difficulty than the over or under-worked one, and of course to him the method of fastening is of less consequence. A proper method is always necessary, and should always be secured. Where there is room, and the circumstances will permit (and every good farmer and every gentleman will find the first, and compel the last), the stalls should be made very wide, and turned into close stalls or boxes, and the horse should not be tied at all. In a box the horse will rest better, if wearied, and get less wearied, if idle, than in open stalls fastened by the head. It gives a choice of position, and this is important to a wearied animal; and it affords occupation and motion to an idle one. All horses will, if they have room, lie flat down on the floor, [illegible]h all their limbs extended. In narrow stalls, with heads tied, they cannot, and are compelled to lie with head held, as when standing, or almost resting with the muzzle on the floor, and with their legs contracted and under them. *Perfect rest* cannot thus be obtained. A box of requisite capacity secures to the horse such method of lying as he prefers and his wearied condition teaches him is necessary, and with less intermission in his labor, gives him better rest, fuller recovery in less time, than in a narrow stable and tied. Humanity and interest demand that the stalls should be made so large, that they may not abridge the comfort and capacity of the horse to do his servant-work to the fulness of his powers, as the Creator designed. In the construction of stalls by the farmer, this point should be kept steadily in view. *He* can have room, and economy will be best consulted by giving to all his animals, loose boxes. If his barn be larger by reason of the boxes, his horses and cattle will be better, by reason of increased comfort and facility for rest; and to do his work, less in number will be required.

Gentlemen building stables for horses in towns, should also *take space* and make boxes. The additional expenditure, represented by the rent of the ground, will be returned by the economy in the life and power of the horse. Less horses in number will do his work, and the good ones so difficult to be got will last longer; so that there will be a saving in expenditure for horses, to sink the increased expenditure in stables, to perfectly accommodate the lesser number. Then not only will *economy* be consulted, but what is of more consequence to the gentleman, his convenience and power to use his horses also. Narrow stables and halters may unfit a horse temporarily to labor, and there is waste in keeping him till he recovers, not merely in feed, but in the veterinary surgeon's bill, and finally in the cost of a new purchase, to supply his place if ruined. Gentlemen rarely ever think of boxes, and we do not know of any in this city. In the numerous stables now erecting by the rich in the court end of the town, kindness to the brute should dictate a proper arrangement for the health and comfort of the horse. When, however, from circumstances, there is not room enough to accommodate with boxes all the horses, stalls and halters must be resorted to. If the stall be narrow and deep, it may be made into a box and the disadvantage of the halter be avoided; in other respects it is no better than an open stall; but even this, by obviating the necessity for the use of the halter, is something important, as all accidents from halter casting are obviated and prevented.

In boxes, whether so wide as to allow the horse to turn, or so narrow as to prevent it, the bottom of the manger must be up quite high, or the manger must descend quite to the floor; and indeed in all stalls, to forestall accidents, this should be done. If it be not high or quite down to the floor, the horse may get his head or feet under or over, and severely injure or permanently cripple himself.

As most stalls are both narrow and shallow, there is no turning them into boxes. In these the horse must be fastened by the halter. In such, halters become a matter of great importance, and their method of attachment also.

Halters are made most commonly of leather, but frequently also of rope, or the head-stall of leather, and the rung, or stale, or tying part, of rope. In all cases the head-stall should be made of leather; our preference is for, and we always recommend that the horse should be fastened by a rope as a rung, or by a chain attached to the leather head-stall. A chain or a rope will last longer than a leather rung, independent of breaking. The rope and chain are less liable to break, and never rot. The leather rung must be oiled, and even then will rot, crack, and break when the horse does not try to break it. When new, a vicious horse will break it, and by accident a quiet one may do the same. A chain or rope will not break, and a vicious or an idle horse will sooner chew the leather than the rope. The rope is cheaper, and will in the end wear out; but it will last much longer than leather. A chain is permanent, and is only objectionable on account of its noise; from this leather and rope are free. A chain and leather are more easily and neatly attached to the head-stall, and on that account are preferable to a rope; but the rope may be neatly platted or braided into the ring of the head-stall Economy and security considered, the rope is to be preferred, as it costs less to buy, and the groom may repair it, which he cannot with leather, and especially with a chain. Then let the head-stall be of leather, with the stale of rope.

The halter should have a throat latch to secure it well on the head; it should not be buckled on too tightly, as it is painful, and from pressure on the poll may lead to irritation, and eventually to poll-evil. It can be secure, and yet be comfortably loose.

The fastenings for halters to attach them to the manger are usually holes in the manger, or rings fixed over the manger into the wall at the head of the horse. Either method is good, and there is no preference except as regards looks. A ring is more sightly. The one will be more secure than the other, according to the manner in which they may

be put up. The manger should be strong and firm, and the ring well fastened.

The horse should never be tied to the ring or to the manger by the halter-stale. A weight with a hole in it, or a ring fastened to it, should be in every manger. The halter-stale should be passed through the hole in the manger, or the ring on it, or at the head of the stall in the wall, and fastened to the weight. The halter-stale should be so long as to allow the weight to rest on the manger bottom, when the horse's head is to the manger, and the weight is only to be raised when he turns to look or step back. A halter-stale fastened to a weight will rarely ever be broken; and accidents from halter casting will be equally rare. Some horses are fond of standing back in the stalls; this the weight will prevent; some must be tied short, and the weight makes a short tie; some need a long halter-stale and a long tie; this the weight will permit. It will be short when needed and long when needed, and cannot be got under foot, as the weight descends when the horse slackens the pull; when he needs more length he gets it, by pulling the halter and raising the weight. Care should be taken to prevent the weight pulling on the head when the horse lies down, as he may not rest well if he has to support a weight.

Sometimes even with weights, horses will get halter cast. To obviate this, a contrivance of which we give a cut, has been adopted. An iron ring is attached to a bolt; this bolt slides into a socket of iron, and is kept in place by a spring. This socket is fastened to the manger or the head of the stall in the wall, having its open end down. If the ring be pulled upwards or backwards in the stall, the ring and bolt remain fast; but if pulled downward, the bolt is drawn and the horse set free. This socket should be set into the wall, and the halter-stale passed through a ring or hole in the front edge of the manger. If the horse get halter caught or cast, the bolt will come away and the leg be free, and yet the horse will be held by the ring on the manger; with this fixture the horse cannot get cast or thrown down, though he may get a leg over the halter-stale. Some security against halter casting should be adopted in all stables, and more especially with valuable horses. For the want of something of the kind, occasionally a fine horse is lamed, or ruined, or even killed.

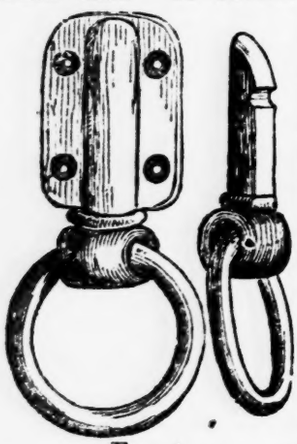


Fig 1.

Few persons keeping horses are aware of the cruelty they constantly practise, and we are sure that the benevolent and just will remedy all the evils which may be pointed out. A little expenditure, beyond that made for the ordinary arrangements, will repay itself over and over, during the lives of the horses used, in increased power to labor, and in the greater length of life. Thus both economy and humanity will be consulted.

In our next we shall treat of stable floors.

MIXED FOOD FOR STOCK.

Wherever the science of feeding is correctly understood, a mixture of food is given to domestic animals. There is thrift, health, and comfort to the stock in this practice, and economy and general advantage to the owner. Good hay is undoubtedly one of the best and most economical kinds of food in this country, as it contains the different elements of nutrition in nearly the proportions required; and when land is cheap and labor comparatively dear, and especially where the soil is adapted to it, grass is, perhaps, the most economical food for general use. But there are many exceptions to this rule. Working horses and oxen require something in addition to hay—something containing more nourishment in a smaller compass, and admitting of more rapid digestion. When this is the case, the most economical food consists of cut hay, straw, or chaff, and meal, or roots cut and *mixed* with the hay or straw; and this is given much more economically, when wet up for a day or two beforehand, and allowed partially to ferment. Straw and grain, especially if the latter be ground, are entirely adequate to answer all the requirements of working animals. Grain alone is not sufficient for this. It is too much condensed, and other coarser food is requisite to distend the stomach, and preserve its healthy action. Straw is found to answer an excellent purpose for this object, and it, moreover, contains the phosphates in large proportions, which are essential to supply the osseous materials for the wasting of the bones.

There is great saving in the cutting of the hay, or straw, in two ways. The animals do not waste it by dragging it out of their mangers, and trampling it under their feet, and time and labor are saved them in masticating it. They obtain their supply of food readily, and then lie down to digest it Fermentation also developes the nutritive matter and leaves much less work for the stomach to perform, and this, by saving muscular exertion, leaves more strength with the animal to be expended on his ordinary work. The same principle holds with milk cows, sheep, swine and even poultry. If the food be given to them in a form more easily adopted to assimilation in the animal system, the greater product of milk, wool, flesh, &c., they can yield from the same quantity. Cutting, bruising, grinding, fermenting, and cooking the food, all tend much to fit it for easy and rapid digestion, and whenever it can be thus prepared without too much expenditure of labor, it should be done.

By adopting a mixed food, much of the coarser products of the farm can be worked up, which are now suffered to be added to the manure heap. Indeed, scarcely any of the vegetable productions of the farm need be suffered to run to waste, till they have first contributed all the nutriment they contain to the support of animal life. It is true, by mixing them with manure, they afford whatever value they have to the next crop when incorporated with the soil. But what can be more absurd, than again to undergo the labor of raising for the use of the stock, what you have already secured? Straw and hay are frequently useful for retaining the valuable portions of the manure, which, from the defective system of saving it, would otherwise be wasted; and when this is the case, they are valuable for

enriching the soil far beyond the materials they possess in themselves for this purpose. But this waste need not occur, even without the use of these valuable materials. The loss which is now sustained from the leaky floors of stables, may be avoided by making them tight, and using conductors, which will lead the liquid manure into reservoirs, which may either consist of turf, peat, or earth, which will absorb and retain it; or tanks where the manure may be mixed with ashes, plaster, or peat, where it will ferment for future use. The comfort of the cattle may be equally secured as with straw beds, by so arranging the floors as to have them at all times perfectly dry, and the shelter made sufficiently warm. If the above arrangements are all carefully carried out, and roots and grain are provided in sufficient quantity to make up the requisite nutriment essential to the stock, in a properly condensed form, and easy of digestion, large quantities of animal products from the farm, may be greatly augmented, much to the profit and satisfaction of the farmer.

THE STATE AGRICULTURAL SOCIETY.

THERE are many reforms which we should be glad to see introduced into this Society, and which we have repeatedly spoken of without much effect. One of the most important of these, in our judgment, is, to elect one or two competent and liberally paid salary officers for its general management. The Presidency is considered an honorary station, and there will always be found a sufficient number of gentlemen in the State well qualified to fill it, and willing to assume the light duties of the office without compensation. The offices of Corresponding and Recording Secretary we would abolish, and elect in their place, simply a Secretary of the Society. This officer should be the principal manager of the Society's concerns under the direction of the President, Vice Presidents, and Executive Committee. His salary should be a liberal one—not less than $1,000 or $1,200 per annum; and he should have such assistants under him, at moderate salaries, as he should find absolutely necessary to attend to the affairs of the Society. In addition to his taking a general supervision of the Society, it should be his duty to make monthly excursions into different parts of the State, and deliver lectures to the farmers—pointing out marl beds and the proper use of them; the benefits of lime and plaster; draining swamps and low places; the use of muck and the best method of mixing composts; best kinds of seeds; best rotation of crops for different localities; the improvement of stock; the culture of fruits; improvements in buildings; improved agricultural implements; the formation of Farmers' Clubs; interest the people in the State Society; get them to become members; solicit donations, &c.

A Secretary properly qualified for his station, and pursuing this course, would undoubtedly add $3,000 or $4,000 a year to the receipts of the Society, and thus pay his salary twice over. We will grant that it would require a person of many and peculiar qualifications to fill the office; but we believe such can be found, and if not, it is high time some deserving man was educated for the station. His heart should be devoted to the cause of agriculture, for the *cause alone;* he should be a practical farmer and stock-breeder; possess a good knowledge of chemistry, geology, mineralogy, and botany, and as much general knowledge as possible. He should have a ready address, pleasing manners, and above all, no other interest whatever to serve than that of the Society, and the general advancement of agriculture. What invaluable reports would not such a man make; and what a mass of practical, beneficial information would he not be able to diffuse among the farmers!

A great reform is demanded in the Transactions. The reports of committees we would not only not publish, as desired by some of our correspondents, but we would not have them made at all, except as the mere reasons, verbally expressed, in the briefest possible manner, of their decisions upon the different subjects brought before them. We do not know why the assembly, on the day of the show, should be bored with long dissertations on crops, stock-breeding, agricultural implements, &c. Such things as these should be discussed in the periodicals, or in prize essays, but not on the festive and busy days of the Society's cattle show.

Much more attention should be paid to the matter of appointing judges, and those persons selected who have really some knowledge of the subjects of which they are to be the umpire. The most unjust, disheartening, and mortifying decisions are annually made for want of proper attention to this subject. We think the judges ought to be furnished with free quarters at the expense of the Society during the three days of its meeting. Another very important regulation demanded is, that the show-yard be closed the first day against visitors, and thus allow the judges a better opportunity to fulfil their duties. It is utterly impossible for them, surrounded as they are with such crowds, to properly examine the objects submitted to their decisions.

The plowing matches, and especially the trial of the draught of plows, as they have ever been conducted, we consider as so much time and money thrown away. The dynamometer is a rank humbug, and no true test of the draught of an implement; for it is scarcely less varying when the plow is moving, than a weather-cock in a gale of wind. A windlass and weights are the true tests. Besides this, different plows are wanted for different purposes, and one for a sandy soil must be constructed in a very different shape from that for a deep loam, or a stiff clay. They require as much classification as the various breeds of stock—and something so of many other implements.

Advantage has been taken of the meetings of the Society, by the keepers of taverns, to charge outrageous high prices for the entertainment of their guests. They will crowd three or four beds into each low, narrow room, and two or three persons into each of these; provide the most indifferent fare at table, and service in the house, and then charge 50 to 100 per cent. more than on an ordinary occasion. The stable keepers, hucksters, and even boot-blacks and barbers, follow the example—all seeming to unite in gouging the honest farmer, or casual visitant, to the utmost they dare. An arrangement should be made with the hotels, &c., beforehand, for the accommodation of a certain number of

guests, and above all, at the common charges. The tavern-keepers have some trouble doubtless; but is not their harvest a rich one, even at moderate prices? Various other reforms have suggested themselves to us, but as our space is limited, we must defer speaking of them to a future day.

FARMS OF THE MESSRS. HALLOCK.

These farms are situated in Milton, Ulster county, almost immediately on the Hudson River. They comprise about 400 acres in one body, and it is rarely that we meet with land more unpromising, at first sight. It is exceedingly hilly, with narrow vales through which gurgle little streams. These vales were originally deep swamps overgrown with bushes and small trees, while the upland was studded with rocks and thickly overlaid with stones.

One cannot but wonder how any person could be found with sufficient courage to undertake to clear such land; and when this was done, a greater wonder would still remain, and that is, how they were to get a living from its cultivation. However, courage and perseverance conquer everything, and people find when they have picked off the stone and laid them up into walls, that the land brings forth heavy burdens of the sweetest and most nutritious grass; and that it will, with good culture, produce 40 to 60 bushels of corn to the acre, 20 of wheat, and the same of rye; so that they begin to see, even in this respect, that it is not so very bad, after all. Fruit trees flourish remarkably well here, from which considerable quantities of apples are either sold or fed to stock, besides not unfrequently making 200 barrels of cider in a season, worth $4 per barrel in this market for vinegar. When the swamps are drained they are found full of rich muck, from one to two feet deep; underneath this are beds of marl. The first of these substances is particularly valuable. Mr. Edward Hallock made an experiment with it on corn last year, against barnyard manure, and the former beat the latter at least one fourth. The valleys throughout this county abound with muck and marl; and, strange to say, the Messrs. Hallock are the only persons in their immediate neighborhood who have made use of this rich vegetable treasure. There are many other things in the farm management here we would like to speak of; but being much in common with farms heretofore described, we leave them for the present.

Stock.—In addition to their fine fruit and good crops, the Messrs. Hallock have an excellent stock of milking cows, and long-woolled sheep. The first are descended mainly from the Bullock breed of Durhams, so famous as milkers—a herd of which we met at Mr. Dunn's, near Albany, in 1839, and wrote some account of in that year for the Genesee Farmer. Great care is taken in breeding these animals both on the male and female side—the Messrs. H. now using a bull descended from Dishley, imported by the late Mr. Brentnall of Orange county, and from whom has descended most of the good grade milkers to be found in that region. These gentlemen informed us that five out of six of their calves may be safely calculated upon as good milkers. They usually give from 18 to 26 quarts per day on good feed, in their best season, and some few, more than this. One of them has made 17 lbs. of butter per week. They sear the ends of the horns with a red hot iron, a few days after the calf is dropped, which prevents their growing, and gives them the appearance of muleys. This is a good practice, as it makes the cows more gentle, and they can never hurt each other with their horns. They are excellent animals, and we wish other farmers would follow their example, and breed for milking qualities. The cows of the United States are greatly deficient in these qualities. With a little attention at first in selection, good animals may be as easily bred as poor ones.

The sheep here are of the Cotswold blood principally, and are a superior flock. The Messrs. Hallock paid high prices for choice selections, to begin with, and have continued to breed with great care. They have frequently won premiums at the State Agricultural Society and other shows, with their sheep, and none in the State bear a higher reputation. More than this it is unnecessary to say.

The country in Milton and around abounds in noble scenery, and being very healthy and furnished with all the comforts of good living, it has become quite a resort for our citizens to place their families for the summer. We are glad to see that the custom of removing the women and children of the city to the country for a renovation of their physical system during the hot weather is on the increase. Few places, we can assure our readers, are better suited for this purpose than the banks of the Hudson.

Cast of a Short-horn Prize Heifer.—Having learned that this cast had been taken in London, Prince Albert intimated to Mr. Rotch of New York, who was the means of getting it up, that he would be pleased to see him in regard to it, at Buckingham Palace. He accordingly waited on the Prince with a cast of the beautiful statue, which he presented to him. The Prince expressed himself highly pleased with the present, and intimated in his interview with Mr. R., that he should propose to the English Agricultural Society, that similar models of prize animals should be taken from year to year as subjects of comparison, and with a view of improvement in stock breeding. Our only object in mentioning this matter is, to show the attention paid to the improvement of animals in Great Britain, and that it is there considered a refined and scientific business, not beneath the attention of the highest minds of the empire. With too many of our own countrymen, we regret to say, stock breeding is thought a *vulgar* occupation, worthy only the merest clodhoppers' attention. We hope to live to see a change in public sentiment in regard to this thing, and are happy to say, that some of the most highly educated and refined gentlemen in this city were subscribers for these casts, and express themselves highly gratified on obtaining them. We spoke of this beautiful model in the November No. of our last volume, and must refer our readers to that for a more full account of it.

What is Good Farming?—The best and most pithy definition we ever heard of good farming, was given by Mr. Kane, at a late agricultural meeting in Dorsetshire, England: He said he fed his land before hungry, rested it before weary, and weeded it before foul.

A POTATO WASHER.

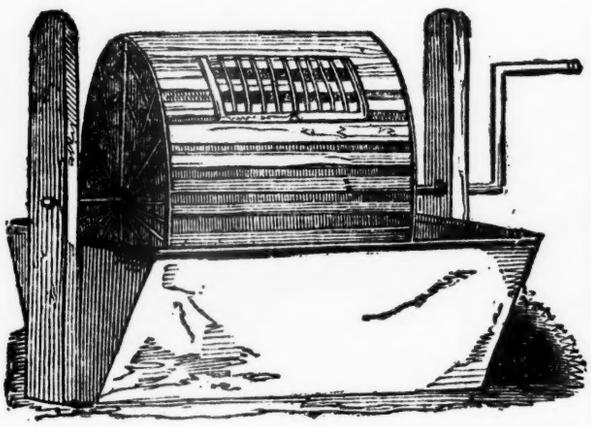


Fig. 2.

We copy the above sketch of a potato washer from the English Agricultural Gazette, which describes it as simply a churn-like cylinder, with open bars placed at such a distance as to prevent any of the potatoes from falling through, except very small ones. As it revolves, the lower part passes through a trough of water, and thus washes them. The cylinder may be easily unshipped from the frame any time desired. We have seen something similar to this in our country, and it was found very convenient, especially where large quantities of potatoes were used. Potatoes, and indeed, all roots, before being fed to stock, ought to be well washed.

Spanish and French Merinos.

In compliance with your request, I give you a short abstract of such observations on the present condition of Merino sheep in France and Spain, as my limited opportunities allowed me to gather, during my excursion in these interesting countries the past year. My travels extended over but a small portion of the sheep districts of the latter country, owing to the many obstacles which concurred to obstruct my progress. My opportunities of observation, therefore, were narrowed down to a small compass, and I beg you will assign no more than their due weight to my superficial examinations.

On my arrival at Madrid, my first step was to ascertain through our minister, Mr. Irving, to whom I am much indebted for furthering my efforts in the most cordial manner—whether permission to export sheep could be obtained. Upon investigation it was ascertained that no impediment existed to prevent their exportation, other than a duty of about $5 per head. Learning this fact, I at once proceeded to elicit such information from some of the leading proprietors, as would tend to give me a general idea of the characteristics of their respective flocks. Although experiencing great difficulty in acquiring any other satisfactory information, tending to establish the superiority of any one breed at the present time, still I found it to be the prevailing impression that the best race of sheep were those belonging to the Geronimo Monks, which, on the suppression of the monasteries, were scattered over the kingdom, and chiefly fell into the hands of the more wealthy grandees. I was told, however, that none of the descendants of this superior flock are now to be found *pure*, owing to the carelessness of their breeding after changing masters, and as a natural consequence of the distracted state of this unhappy country, which in subjecting the agricultural interest to all the harassing vicissitudes of civil war, has necessarily prevented that attention which alone could secure and preserve the superiority and purity of this race. To this cause also is doubtless to be assigned the deteriorated condition of those flocks of which I took a personal inspection. The flocks of the Duke del Infantada and Don Fajoiga, are among the largest in Spain, embracing upwards of 200,000 sheep. Those of the latter rank much higher in choice breeding in the estimation of Spaniards, than the former, though he very frankly admitted that pure bred Paulars were not to be found in his flock, nor, in his opinion, did they exist at the present day in Spain. This assertion I took without any qualification, as coming from one who is entitled to every consideration, and in right not only of his being one of the most enterprising agriculturists of the day, but of his prominent position as President of the corporation instituted for the security and preservation of the sheep interest. I regret to add, that some of the Spanish breeders have latterly made the same mistake as too many of us here at home, viz., in having sent to Saxony for rams to cross upon their flocks, which has lessened the size and injured the constitution of their flocks. They now see their error, and are returning to the strong, hardy, pure old race as fast as possible.

The principal province for the pasturage of *transhumantes*, or wandering sheep, during the winter season, is, as you are well aware, *Estramadura*. To this interesting portion of the country I directed my steps, deviating from the ordinary track of travellers, for the purpose of taking a personal inspection of some of the most celebrated flocks. My interest was first excited by the reports which reached me, of the superior reputation of the flock of Don Jose Alvarez, near Frujillo, and accordingly I availed myself of the earliest opportunity to see them. This person was the administrator of the Prince of Peace, and had the exclusive management of his flock. On the confiscation of his property, a portion of the sheep fell into his (Alvarez's) hands. He represented them to me as being the only pure Paulars now to be found in Spain. These sheep were very uneven, and did not impress me favorably, though possibly a good judge might by careful selection obtain some valuable animals here. The bucks were of fair size, and of good proportions; tolerably well woolled; the quality of wool quite good, and would command about 40 cents with us at present. I should think that selected bucks would yield 8 lbs. per head. The price asked for these sheep was $12 each. I may as well mention here that the English importation, in 1814, was made from this flock. After this I visited a number of other flocks, but they were so inferior to those last seen, that any further account of them is superfluous.

In these flocks, or indeed any others it was my good fortune to see, I could discover no points of superiority sufficiently marked to justify an importation into the Uuited States. I am very far from wishing, by these remarks, to discourage any one

from investigating the subject for himself. My opportunities may have been too limited for an impartial judgment; and a more thorough and extensive search by a more experienced person, might find something worthy of being brought to this country, to improve our fine flocks. I heard of a few isolated individual sheep in other provinces, as being very large, strong and fine. But if these could be had at all, it would be at very high prices. I had quite forgotten to observe, that the price of wool, of the better grades, ranged this year, from 80 to 100 rials per arroba, or about 20 cents per lb., in its unwashed state.

I cannot omit in my notes on the Spanish sheep, some allusion to the dogs which I saw in charge of them. These noble animals are a very necessary appendage in this country, for the protection of the flocks against the ravages of wolves, which infest in large numbers almost every portion of Spain. They resemble the mastiff more than any other race of dogs with which I am familiar, exceeding the huge and far-famed St. Bernard in size, and blending unusual ferocity, with all the docility and sagacity which characterizes that breed. The price of these dogs varies from $30 to $50. They are mostly a brown or tawny color; have fine muzzles, large heads and jowls; ear standing erect from the head nearly its whole length, but dropping over at the end; full in the throat and neck; stout and muscular in the whole body; about two feet six to two feet nine inches high; hair long and wavy, and the legs and tail feathered. They are the largest dogs I have ever seen. One is more than a match for any wolf—those of Spain being large, savage, and courageous—and two will kill one directly. They would prove of great value for certain portions of America, and should be imported for the purpose of guarding our flocks.

As regards the sheep of France, which came next in order under my observation, I feel enabled to speak with more confidence, having more time at my disposal when I visited them, and an opportunity of subjecting them to a more minute examination. The Rambouillets I take up first as in the order visited. They struck me as being infinitely superior to any I had seen in Spain. They are of great size, and are very fine and even in their fleeces. A prominent defect in the flock, is rather too great a length of leg. This, however, can be easily remedied by directing attention to this point of their breeding. Their bucks shear on an average from 12 to 16 lbs. per head, and occasionally go as high as 17 or 18 lbs.; the ewes average from 8 to 10 lbs. The wool, though unwashed, is quite neat and free from tag-locks. The history and management of this flock is so well known, and the fine specimens from it recently brought into this country, have rendered their superior qualities so familiar, as to supersede the necessity of any further notice of them. A public sale takes place every year in May. They are in great demand at present and bring high prices.

I will now direct your attention to another flock derived directly from the Rambouillets, which, not only in the opinion of intelligent French agriculturists, ranks at least as high as these; but in my own humble opinion, is unsurpassed in most points of excellence by any sheep I have as yet seen. I refer to the flock of V. Gilbert, who resides in the Department of Oise and Seine, par Maule, some thirty miles from Paris. This flock was commenced by the father of M. Gilbert, about 40 years ago, and has been improved by judicious selections and occasional drafts from the Rambouillets and other flocks of equal celebrity. The great points of excellence, so peculiar to his flock, consist in their unsurpassed beauty and symmetry of form, with large size, and wonderful production of wool. I saw bucks here which produced the past year 18 lbs. of wool, and of a very fair quality. Their age was two years old past. I selected, with the intention of importation, a yearling buck, which I considered the finest specimen of the sheep kind I have ever seen. This animal had taken the first premium the past year at the great Sheep Fair of France, at St. Germaine. He was of large size, and unequalled in form, being then seventeen months old, and weighing 215 French pounds (about 230 lbs. English). His fleece weighed 16 lbs. in the grease, and was of a quality that I feel assured, would command in this country 40 cents per lb. at this present moment, or perhaps more, clean washed. The price of this animal may be regarded as exorbitantly high—$400; but when it is considered that he was much the best animal produced by this gentleman during the last ten years, and doubtless possessing qualities so much superior to most of his race in France, the terms cannot be regarded as unreasonable. Unforeseen circumstances causing my return in July instead of September, as I had anticipated, alone prevented my bringing so valuable an acquisition with me for the improvement of our race of Merinos in this country; and to my great regret, no pecuniary consideration could induce M. Gilbert to part with the animal before the close of the tupping season, which in his flocks is during the month of August. The annual sale of the produce of this flock takes place during the month of May, and the price they then bring varies according to their excellence, from 250 to 1000 francs; the ewes are very beautiful, and command about 100 francs each. The risk, and various items of expense in importing these fine animals into the United States is considerable, much more than one unacquainted with the business can form any idea.

T. H. N.

New York, Dec. 17, 1845.

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We are under great obligations to our correspondent for the above interesting article on French and Spanish Sheep, and will add, that his account of them is corroborated by several gentlemen from these countries with whom we have recently conversed. Two of our friends, after viewing the French and Saxon Sheep, are now in Spain looking over the flocks there. They are excellent judges of sheep and wool, and will undoubtedly import a few choice animals the present year. On their return to the United States we shall be furnished with full particulars of what they may have seen while abroad. We are persuaded that all we want now, is a slight dash of the best foreign blood among our noble native flocks, to make them equal to anything in the world as individuals, and far superior as a mass.

Mr. Norton's Letters.—No. 15.

Agricultural School of Templemoyle, Ireland.—After my visit to Islay, described in my last letter, I made, in company with Prof. Johnston, a short excursion to Ireland. The immediate object of our going thither at this time, was to be present at an examination of the Templemoyle Agricultural School, near Londonderry. This school has now been established a number of years, and is in a most flourishing condition. This success, however, would never have been achieved, had it not been for the indefatigable exertions, and liberal contributions, of many gentlemen interested in the cause; chief among whom must be ranked Sir Robert Ferguson. Living only a few miles from the school, he has enthusiastically endeavored to forward its interests, and now has the pleasure of seeing it in a condition to fulfil his expectations.

Templemoyle is about nine miles from Londonderry, situated on a beautiful green hill, with a most lovely prospect from its front. The buildings are plain, substantial, and convenient; the dormitories for the boys scrupulously clean, and everything in the highest order. There is the commencement of a good agricultural museum, containing seeds, roots, tools, models, &c.

The farm attached to the institution is worked entirely by the boys, and is in beautiful order; we saw, I think, but a single weed. The land was originally light and thin in some places, but mostly a poor thin clay. By thorough draining, deep plowing, liberal manuring, and judicious cropping, it has now been brought into capital condition for the most part; all of the crops were good except the grass in the pasture field.

The boys are maintained for the very low sum of £10, or about $50, per annum, including tuition; of course they live in the most economical manner.

Examinations first took place in Geography, Arithmetic, Reading, and all the ordinary branches. They were then brought out upon the green in front of the house, in order that all of the great crowd of spectators might have an opportunity to hear the Agricultural examination. They were first required to answer a long list of written questions; this they did very well, but it was not perfectly satisfactory, as they might be supposed to be beforehand prepared upon them. Prof. Johnston then took up the examination, and subjected them to a very severe cross-questioning, which they bore admirably. Their answers showed that they had not merely learned a certain number of answers by *rote;* but that they had *thought,* and had in some degree applied the principles taught them, to the circumstances in practical experience which each day presented. The result was very satisfactory to all friends of the institution; and, I believe, satisfied every one present that the boys were prepared for future usefulness.

Since the Templemoyle examination, I have attended the Annual Show of the Highland Society at Dumfries, and while there, I saw an examination of about 25 boys, in Agricultural Chemistry, who had been brought together for the purpose from various parts of Scotland. I was at a preliminary and a public examination. These boys, in their different schools, had attended to Agricultural Chemistry for half an hour or an hour, once a week, this length of time being that recommended by the Education Committee of the Agricultural Chemical Association.

As a preliminary step they were examined by Mr. Davidson, Rector of the Normal School, Edinburgh, on the usual branches of education in the parish schools, to show that these had not been neglected. In conclusion, Mr. Davidson declared that in these branches they seemed equal to the children of other schools. Prof. Johnston then commenced the part allotted to him, and purposely striking away from the beaten track of the Catechism, made his questions unlike in form to any they had before heard. The readiness and the thorough acquaintance with first principles which they showed, astonished every one present. Some prizes had been offered by the Agricultural Committee to the boys who acquitted themselves best, and the eagerness which they all manifested, was most amusing. The different masters also became highly excited each for his own boys, and I felt myself, when the competition waxed keen, becoming almost as much interested as if I were one of the parties concerned. Some eight or ten of the boys were so equally matched that it was almost impossible to decide which was best, and premiums were accordingly given to each of them. I never saw anything more entirely and triumphantly satisfactory than this examination. No person present could have remained unconvinced that young boys could not only remember, but *understand,* the principles of scientific agriculture, as laid down in Prof. Johnston's Catechism. One of the boys who took a premium was a little fellow of eleven years, and the pertinency of his answers frequently elicited bursts of applause. Eight schools were represented at this time; but this instruction has as yet been introduced into but a small portion of the parish schools of Scotland. What has been done there and in Ireland is most encouraging, it shows that the movement is on safe ground.

I trust that in America, by the universality and completeness of our instruction, we shall be able to show the old country an example in this respect.

Durham, Nov. 12, 1845. JOHN P. NORTON.

A SUPERIOR YOKE OF WORKING OXEN.—When I was present at the Cayuga County Cattle Show last October, I saw a very superior yoke of working cattle. The owner informed me that he had put in 50 acres of spring and fall crops of grain with them the past season; some of the land for which had been ploughed three times, and that this yoke of cattle had done the whole, besides hauling his hay and grain from the field to the barn during harvest time. Will not this demonstrate that ox-labor is cheaper than that of the horse? N.

CURIOSITY—GRAFTING.—In the spring of 1844, I put two grafts of an early apple, into an old bearing tree. In July or August (the exact time not remembered) following, I cut off one of the sprouts, and put two buds in other limbs. This summer the buds bore apples; one of them had four apples on it, which came to maturity; the grafts also bore apples. The fruit partook of the nature of the tree in which it was grafted to some extent.

Jersey Shore, Pa. ROBERT HAMILTON.

AGRICULTURAL CHEMISTRY AND GEOLOGY.—No. IV.

Q. Why do old dairy pastures especially require bones?

A. Because milk and cheese contain bone-earth, and if these be carried away and sold off the farm, the land is robbed by degrees of this bone-earth, more than of any other substance. Only those grasses can then grow which require little bone-earth.

Every ten gallons of milk contain about half a pound of bone-earth. A cow, therefore, which gives twenty quarts a day, takes about two pounds of bone-earth from the soil every week. To return these two pounds to the soil three pounds of bone-dust are required.

Q. Is hair much used as a manure?

A. No, hair is generally too expensive to be used as a manure. But, in China, where the people's heads are all shaved, the shavings are collected for manure, and the sweepings of our hair-cutters' rooms might be also employed with profit.

Q. In what form is wool used as a manure?

A. In the form of woollen rags. Mixed with earth, woollen rags make an excellent compost.

Q. What kinds of animal dung are most commonly employed as manures?

A. Night-soil, horse dung, cow dung, sheep's dung, pigs' dung, and birds' dung.

Q. Which of these is the most valuable?

A. In general, night-soil and birds' dung are the most valuable; next, horse dung; after that, pigs' dung, and lastly, cow dung.

Q. Why is night-soil so valuable?

A. Because men generally live upon a mixture of animal and vegetable food, which renders the dung richer.

Q. Why is the solid part of horse dung richer or hotter than cow dung?

A. Because the horse voids little urine compared with the cow.

Q. What is the principal objection to using pigs' dung?

A. The disagreeable smell and taste it is said to give to the crops raised from it.

Q. What is the best way of using pigs' dung?

A. The best way is to make it into a compost, or to mix it with the dung of other animals.

Q. Why is cow dung colder and less liable to ferment than most other kinds of dung.

A. Because the large quantity of urine voided by the cow, carries off a great proportion of that which would otherwise cause it to ferment.

Q. How would you collect the liquid manure of your farm-yard?

A. I would make a large tank or cistern in or close by my farm-yard, in which I would collect it.

Q. How would you use this liquid manure?

A. I would pump it back occasionally upon my dung heaps, so as to promote their fermentation; or I would pour it upon my compost heaps.

Q. Does birds' dung form a very valuable manure?

A. Yes, pigeons' dung especially, is a very rich manure; and the dung of sea-fowl has lately been introduced into this country, with great advantage, under the name of guano

Q. What is nitrate of soda?

A. Nitrate of soda is a white salt-like (saline) substance, which is found in the earth in some parts of Peru, and is often applied with great advantage as a top-dressing to grass lands and to young grain.

Q. What does nitrate of soda consist of?

A. It consists of nitric acid and soda.

54 lbs. of nitric acid, and 31 lbs. of soda, form 85 lbs. of nitrate of soda.

Q. What is nitric acid?

A. Nitric acid is a very sour corrosive liquid, called also aqua-fortis. It consists of the two gases, nitrogen and oxygen.

14 lbs. of nitrogen and 40 lbs. of oxygen, form 54 lbs. of nitric acid.—*Prof. Johnston.*

DISEASES OF ANIMALS.—No. 1.

I HAVE recently seen in your journal some notice and review of Mr. Morrel's work on Sheep husbandry; and as I intend from time to time to make a few communications on the various diseases of sheep and other animals, it has brought to my mind one very singular, and perhaps to others, unobserved disease, which I will give some history of, by way of introduction to my future numbers.

On riding out to my farm one pleasant morning, some time in January last, my tenant informed me that one of my ewes, which came in the night previous with a pair of twin lambs, had just died. She being a fine young ewe of an uncommon breed for thrift and quality, I felt on that account a particular interest in ascertaining the cause of her death. My tenant told me that for a few days, just previous to her yeaning, she had been dull, would not eat with the flock, and would stand out in the field. I went out to the field where was the body, found it still quite warm, examined its external appearance very critically, could not discover any marks of violence or injury, and consequently proceeded to have a personal examination, which is always my practice when any of my stock dies from disease, or any unknown cause, which I hope will give additional worth to the cases I shall report, as every examination has been made by myself.

On first exposing the abdominal viscera and the contents of the thorax, every part appeared to be in so healthy a condition, I imagined I should be baffled to account for the cause of its death; but on opening the womb, I readily discovered extensive disease; the whole internal surface was studded with a kind of tumor, called in human medicine the cauliflower excrescence. This is a tumor which resembles the cauliflower in appearance, and which has been sometimes noticed in the human subject, as a disease of females, a drawing of which, together with hydatids, another tumorous disease, may be seen in Dr. Dewees' excellent work on the Diseases of Females. These tumors in the ewe spoken of, were of a flesh color; the texture appeared to be extremely delicate, and a fluid of a bloody watery nature seemed to be discharging from the hurt or wound, occasioned, in all probability, from parturition.

This case is interesting in many respects; for such tumors or diseases are very seldom met with in the human female, and for the few cases which are on record, no adequate cause could be assigned.

Again, as the ewe was but little more than a year old, came in with her first lambs, had not appeared to be diseased until within a few days of yeaning, all taken into consideration will serve, I hope, to cause additional attention to be paid to the diseases of animals, and search for causes of death in every animal that dies in any mysterious or uncertain manner.

There are so many diseases in animals that assimilate to those of the human species, and the treatment of such appears so well adapted to each other, that medical men generally are turning their attention to animal medicine and to agriculture, as sciences intimately connected with their own profession. In fact, the nature and diseases of animals, especially those of sheep, have been too long neglected, and the remedies that are generally prescribed, are by those who know not the why nor the wherefore—who are entirely unacquainted with the true nature of anatomy, physiology and pathology of animal medicine, and, under such circumstances, are as much liable to do injury as good. Humanity, therefore, justly prompts a more special attention to animals—to ameliorate their diseases and sufferings, and render more scientific and systematic attention to their history. We may justly consider, that a malpractice in regard to brutes, that shall occasion an undue suffering and sacrifice of life, is attended with a degree of moral responsibility at least proportionate to human life itself. The way, then, must be opened by medical men; they alone, at present, as a general thing, can give system, order, and science to the study, and I am happy to see that animal medicine and agriculture are no longer beneath their notice, and begin to assume a standing and attention that they so justly deserve. I shall devote some of my future numbers for especial consideration of medical men to the subject of husbandry. ANDREW STONE, M.D.

Lake Court House, Ind., Nov. 22, 1845.

CLIQUES AS OPPOSED TO HONORABLE COMPETITION.

I HAVE looked with sadness and sorrow upon the tendency of partyism as it shows itself in various departments of husbandry in this country. As a people, we are such worshippers of Mammon, we are in such haste to be rich, that many, very many, attach a fictitious fancy-value to everything they possess; and in their minds, there is a corresponding disposition to depreciate everything of equal value belonging to another. A stock-breeder, for example, may have a very valuable breed of horses cattle, sheep, or swine. In his estimation, it is the best the whole country affords. He wishes all others to have the same good opinion of his animals as himself. His expectations are raised of realizing large profits from sales of his unrivalled stock. The public must be dragooned into a kind of mania, to possess what he possesses, and every one who buys becomes at once a partner in the concern. The press is laid under contribution in a thousand forms, to puff his wares. Some favorite agricultural paper is made the constant medium of communication with the common minds; and the system of subsidizing editors to insert sham or covert advertizing, is prosecuted with all the ingenuity of which the man is capable. The business of *writing up* his own stock, and *writing down* the stock of others, becomes a regular business, and is prosecuted with an energy worthy of a better cause. I have been sickened and pained at the exhibition of utter selfishness and want of heart, which I have often seen manifested, so unworthy of a high-minded farmer. We want nothing of this cliqueism and partyism in American husbandry. We want honorable competition, not this mean and miserable spirit. And for, one, I think it high time that it was rebuked. I blame the agricultural press, when it lends itself even unwittingly, or otherwise, to promote the views of such a class of men. It ought to know better. And I blame more than all a *venal* agricultural press, that will be flattered, or cajoled, or bribed, or bought up, to serve the interests of any clique or party in husbandry or the mechanic arts. We have a great country, and we should have hearts large as our country. We need honorable competition, and we should do all in our power to encourage it. Let us feel that we can talk with each as friends, not as foes, through your columns, and those of every similar paper in the land. Let us be improvers, not calumniators.

What say you, Mr. Editor? Am I right or am I wrong? Is there no venality and corruption of the public press in your department, to be feared? I bring no accusations against *you*. I believe you have endeavored to breast this influence with becoming energy. Let our farmers be a noble band of brothers, each doing well himself, and rejoicing in the prosperity of others—too high-minded not to despise the spirit of which I have spoken, and too honest not to bestow upon it a justly merited frown and rebuke. I hope I shall despise myself when I become so selfish and so mean that I cannot rejoice in the improvements of others, and when I cannot admit the merit of anything which they possess, which has merit in itself. I will give my approbation to whatever is meritorious, let it be where it may, and however it may interfere with my individual interests. If another man has what is really better than anything I possess, let my tongue be palsied when it refuses to say it. AGRICOLA.

FINE CHINA CLAY IN GEORGIA.

SOME time in the early part of last summer, a Mr. Hardy, from Georgia, left at our office, 27 Cliff street, a small sample of white clay, which he supposed might be fuller's-earth. I tested it for that earth, but found it totally different. On presenting the sample before the Brooklyn Natural History Society, it was referred to Mr. J. T. Bailey, a gentleman well acquainted with the various materials used in the china manufactory of England, who immediately pronounced it to be a fine quality china clay, bought by their potters at $15 per ton; at least double the price of fuller's-earth. The following is the report made by Mr. Bailey to the Institute:

"The specimen of clay, brought by Mr. Hardy, from Georgia, I immediately saw was good china clay, not inferior to the Devonshire clay used in making the best china ware in the Staffordshire potteries. I divided it into two pieces, and submitted it to a strong heat, sufficient to calcine or bake it into (what the potters term) the biscuit state, as it appears in the unglazed piece, which is the state in which the pattern is always put upon china. I then took the other piece (which was in

the biscuit state) and dipped in into potter's glaze, and submitted it to a sufficient heat to vitrify it, as it appears in the piece that is glazed. I was under the necessity of using the common yellow glaze employed by the manufacturers of stone ware here, but if I had used the fine white china glaze, it would have been a beautiful white instead of yellow. I consider the discovery of this china clay to be very important, for it has hitherto been thought that a fine description of china could not be made in the United States for want of proper clay; but this proves that clay sufficiently good can be found, if potteries were established for making it into china-ware."

The Georgia papers are requested to copy the above, that it may be brought to the notice of Mr. Hardy, who did not leave his address when at the office of WM. PARTRIDGE.

New York, Dec. 8, 1845.

CURING MEAT.

FARMERS have a mutual interest in the communication of everything which is beneficial in relation to their common concerns in Agriculture, and domestic economy. With this view, I would thank you to insert in the Agriculturist the following observations, relative to condiments for curing meat. Having for 35 years avoided as far as possible the use of meat which had been cured with saltpetre, on account of its injurious effects, I shall endeavor to show why that article should be disused, and what may be used in place of it; being at the same time fully aware of the influence of prejudice and habit in the perpetuation of injurious customs.

It is contended by some persons that man was not intended to be a carnivorous animal, and that meat should not be used for diet; but all admit that he is, and ought to be, a granivorous animal, and that such grains as wheat, rye, oats, barley, &c., are healthy articles of food, which were designed for his use. In these articles are contained the following ingredients, viz.: potash, soda, lime, magnesia, alumina, silica, iron, sulphuric acid, phosphoric acid, and chlorine or muriatic acid, &c. These articles are supposed to be united together in grain according to their affinity. And it is not doubted that they were placed in grain for the purposes of digestion, nutrition, and secretion. Those parts of them which actually enter into and are used in the system, are principally carried off through the kidneys in the urine; as may be seen by the analysis of urine, by Berzelius, which is as follows, viz.:

Urea	30.10
Free lactic acid, lactate of ammonia and animal matter not separable from them	17.14
Uric acid	1.00
Mucus of the bladder	0.32
Sulphate of potash	3.71
Sulphate of soda	3.16
Chloride of sodium, or common salt	4.45
Phosphate of soda	2.44
Phosphate of ammonia	1.65
Muriate of ammonia	1.50
Phosphates of magnesia and lime	1.00
Siliceous earth	0.02
Water	933.00
	1000.00

By this analysis we see that out of these ingredients, which are contained in grain, are formed a variety of compounds, either in the grains themselves, or in the course of the processes of digestion and secretion, and among the rest are three kinds of alkaline salts, viz.: chloride of sodium, or common salt, and the sulphates of potash and soda in nearly equal proportions; and they are carried off in urine, in order to give place to an additional supply which is continually furnished in food. These three kinds of salts, then, are natural to the animal system of man, and are necessary to it, and are the only kinds of salts which can with certain propriety be used for curing meat. Other salts, such as alum, or borax, may preserve meat, but they would be injurious in the system, not being natural to it.

The purgative and antiseptic properties of these three kinds of salt, common salt, and the sulphates of potash and soda, are somewhat similar; but the sulphuric acid is remarkably antiseptic, and it communicates its antiseptic properties to the sulphate of potash and soda in a high degree. A much less quantity of sulphate of potash will cure and save meat than of common salt or saltpetre. The sulphate of soda I have not tried in curing meat, and therefore cannot say what flavor it would communicate to meat. But the pure sulphate of potash I have used in curing hams and shoulders of pork, and dried beef, and barreled beef pickled; and it communicates to meat an admirable flavor, entirely superior to that which it has when cured by saltpetre. I used nearly the same quantity in curing meat as is generally used of saltpetre, or about one ounce to 25 lbs. of meat. I have known the sulphate of potash applied to the curing of meat in another manner, ever since I can remember anything about the curing of meat, for at least 40 years. The sulphate of potash abounds in wood ashes, and is known to potash-makers by the name of *nitre*. The manner in which I have known it used was as follows:—Put one peck of wood ashes into 20 gallons of water, stir it up thoroughly, then let them stand and settle. After the water is settled, and is clear, pour off the clear white ley which is thus made, into another cask, and dissolve in it half a bushel of common salt, stirring it well. Let this settle, then pour off the clear brine, and put it upon as many hams and shoulders as it will cover, and let them lie in it three weeks; then hang and smoke them. If they have been anointed with sugar or molasses, and lain a few days before the brine is put upon them, their flavor will be improved by it. Meat has a stronger affinity for the sulphate of potash than it has for common salt, and therefore the common salt which is present in the brine will in no wise lessen the effect of the sulphate of potash.

By reference to the Cultivator, vol. 8, page 114, it will be seen that Mr. John Lewis, of Llangollan, Kentucky, has for 35 years used another mode of applying the sulphate of potash which is contained in wood ashes, to the curing of hams and shoulders; which I doubt not is equally effectual with the modes which I have suggested, but not quite so convenient as to mix the pure sulphate of potash, with brine of common salt. But I doubt not it is equally effectual His mode of curing is to

mix one part wood ashes with four parts of common salt, and pack the hams down in this mixture, and let them lie three or four weeks, and then wash them off and smoke them. In this case, as the soluble parts of wood ashes are principally potash and sulphate of potash, the moisture of the meat shortly dissolves them both, and the sulphate of potash will be taken up by the meat in the same manner as if in brine. And Mr. Lewis informs us that this mode of curing makes good sweet meat. Saleratus, also, almost invariably contains a considerable proportion of sulphate of potash. Saleratus is made from the pearlash of commerce, merely by impregnating it freely with carbonic acid, and the pearlash of commerce almost invariably contains a considerable proportion of sulphate of potash, but in various proportions, according to the quality of the ashes from which it is made.

In the year 1817, I had on hand 7 tons of pearlash, and perceiving that sulphate of potash abounded in it, I separated the sulphate of potash from it by a simple process, and obtained 520 pounds from the 7 tons of potash, or nearly 4 per cent. Saleratus, therefore, may be used instead of white ley in curing meat. But the surest and best way for those who can obtain it, will be to use the pure sulphate of potash. The sulphate of potash is a strong salt, and yet is only a gentle purgative. An ounce is rather a large dose, but would not injure any grown person. On the other hand, saltpetre, in large doses, irritates and inflames the bowels, and a dose of one ounce produces death. It is a strong poison; and fortunate would be that person who could escape death, even with the very best medical assistance, after taking such a dose. For the truth of this, reference may be had to Beck's Medical Jurisprudence, article, Nitrate of Potash. In small doses of one or two grains it diminishes the heat of the body extremely, and is used by physicians for that purpose in fevers. In healthy persons it produces an unnatural coldness and dyspepsia. While spirituous liquors were in common use, it may have been useful in lessening the unnatural heat occasioned by them. But now that the cause of temperance so generally prevails, there seems to be no good reason for continuing the use of this poisonous ingredient as a condiment for curing meat. And if its properties and effects are generally well known, its use for this purpose will be abandoned.

HENRY J. CANFIELD.

Canfield, Ohio, Nov. 10th, 1845.

IMPROVING LAND.

HAVING succeeded beyond my most flattering expectations, through the aid of the Agriculturist and kindred journals, in subduing a piece of ground that was deemed almost unconquerable, I wish to give your readers a few very plain facts, which will show that sustaining agricultural journals is a profitable investment. I commenced tilling the soil on my own hook, quite young, and practically knew but little about it; and though I have had my own ignorance and the prejudice of others to contend against, yet I have already hinted, and in the sequel will attempt to show, that I have accomplished something. I happen to know some farms where some of the best meadow land is a scar on the place; bogs, briars, and wet places abound, where at least two tons of good hay should be annually cut to the acre; and then produce as much pasture beside, in one season, as it would previously to any improvement. Now, I wish to attract particular attention to this fact, for it is indeed a *fact;* though I know some old-fashioned farmers, who, if they were to meet with this, their mouths and eyes would expand with astonishment, and horror would be depicted on every furrow of their visages. First of all, let me say, that it needs a due share of energy and perseverance, qualities I hold essentially requisite to the accomplishment of any undertaking; but where a farmer especially is bound to persevere, it really seems astonishing what one can accomplish. But, to my object. I am extravagantly fond of improving land; there is something peculiar about it that always interests me; it really seems like a certain way of improving one's self; and who is there that cannot appreciate it? Certainly, waving fields of grain are far more beautiful than acres of brush and stone.

I have a small plot of ground that once seemed graced with almost innumerable obstacles to successful cultivation; bogs and bog holes; hedges and briars; low places and high places, existed in all their native majesty; and it really seemed irreclaimable. But I have not found it so. The first step was to drain it thoroughly. And here just allow me very briefly to repeat my testimony in favor of draining. Previous to draining, the ground was so peculiarly situated, every little shower the water would collect in little pools, causing, for the time being, a certain check to all our operations, thereby losing much time. Now it bleeds at every pore, and we no longer fear to have it rain. To all our farmers I say, *drain* land that needs it, without delay. *Standing water is death to all useful vegetation in this climate. Draining does wonders.* After a thorough and complete draining, I could scarcely recognize the soil; the difference in the yield of grass was perfectly astonishing. Everything that could grow seemed to enjoy and take advantage of its new liberties. If any anti-book-farmer wishes to mark the contrast between improved and unimproved land, I invite him to come over and see it; for just alongside of mine is a piece of ground still in its original neglected and forlorn state, yielding but an indifferent supply of pasture. Says one, why does not your next neighbor follow your example? I answer, he is one of the easy, old-fashioned kind, but often tells me he feels encouraged *now*, and thinks *some day or other* he will undertake it.

My next step in order was to cut and burn the bogs, and apply the ashes to a crop of corn, which proved more pleasant and profitable than crops of bogs. I have just now completed plowing for the season, having the ground as rough as possible, in view of the action of the frost, which, by spring, will prove an admirable pulverizer. One more fact I wish plainly understood. I plow my land very deep, much deeper than many of my neighbors, and have never failed from this cause in getting a remunerating crop. At the solicitation of a friend, I attended the late plowing match of the American Institute, at Harlem, and however nicely done otherwise, I soon observed that, for some soils, I should wish it deeper. My average depth for plowing is

twelve inches; but the heavier the soil and the more retentive the subsoil, the deeper would I plow. I particularize on this fact, because I have years of my own experience to support me, and because I have old-established farmers all around me who are very much prejudiced against deep plowing. Its advantages, in a few words, are a deep soil for roots to penetrate for nourishment, and that the surplus water may pass through more rapidly. But a very safe criterion is a comparison between an ordinary farm and one where deep plowing and good cultivation is constantly practised; then mark the difference in the yield, aside from the general appearance of the farm. I always want those who are opposed to deep plowing, to account for the enormous yield of vegetables and growth of trees in a garden where the soil has been trenched and manured to the depth of eighteen inches or two feet. As to the depth, I would never plow in any soil were it possible, less than twelve inches, and in some soils much deeper. It is true, I often expose a poor subsoil in my practice, but to this I apply a double portion of manure. As I am of the opinion that manure for land is like oats for a horse, it is the best medicine you can give, and as the oats are applied inwardly, so I plow in my manure; and as it seems to me the surest way of securing its benefits, or of "fixing the ammonia," as the *fashionables* will have it. I have seen farmers scatter loads and loads of coarse yard manure upon the surface of the ground, which practice I consider wasteful in the extreme, as almost every particle of any use is lost, as it is the *roots* we wish to supply with warmth and food, and not the *air*. I believe, however, we have yet much to learn in the application of manures. Now, as to the economy of my practice, I will add that I am perfectly satisfied, and will give one proof in *dollars and cents;* as English writers say that is the universal way of defining American problems. My crop of hay this dry season I calculated paid the interest of $5 per acre, while along side of it, is land that scarcely yields enough to pay for fencing.

One more word as to manure. I am no chemist or scientific farmer, yet I believe in manure, and make it my constant practice to apply to the land every substance in the shape of manure, except such decidedly acid substances as new tan, pomace, and the like. The higher portion of my ground I have converted into a nursery, and have now upon it a most beautiful, healthy, and thrifty growth of fruit trees; and as I have now come to the *tree* part, my favorite hobby, I may at some future time, if agreeable, give you a few practical hints on the successful cultivation of fruit trees. As I have been myself remarkably successful, I could wish that others might enjoy as much. W. D.

Morristown, Morris Co., N. J., Nov. 27, 1845.

CUTTING ROOTS.—Happening in your store the other day, in your absence, I was shown quite a variety of machines for cutting roots. I have no doubt they will do their work well and cut with great rapidity; yet after all I question whether they are a labor-saving machine to the small farmer. I can, in fifteen minutes, cut up on the frozen ground, or on my barn floor, with a strong hay knife or sharp spade, as many ruta-bagas or beets as ten head of cattle ought to eat at a meal. Common turnips and potatoes are so small they may require a machine, and perhaps when these are much fed, it will be economy to purchase one. JAS. WINTHROP.

Harlem, Dec. 13, 1845.

AGRICULTURE IN ALABAMA.

As the year 1845 is now coming to a close, I feel it due to the different Agricultural Works, which I take, that I give through their columns, some account of the operations on my farm. I say some account, for it is impossible for me to give in one sheet anything like a *full* account, as I find myself at this time, at page 188 of what I term my farming memorandum book, or diary kept of all the operations done on my farm. Although I have kept a similar book for near twenty years, I have never attempted to give at the close of the year my system of farming; but believing that if the cultivators of the soil throughout the United States, would thus compare notes once a year, it would have the effect of greatly encouraging each other in improving their system. I speak from experience, having been stimulated to renewed exertion often by reading from the pages of the different papers and periodicals devoted to agriculture, the many accounts of the success of the farmer. Now, I cannot give my brother farmers a very flattering account; having settled a new country, every furrow I have plowed has been among trees and stumps. I will now, however, give it as it is.

It is my custom to commence each year on the 1st of January. The profits of the farm vary greatly with the seasons, as every farmer knows. We cleared in 1844, upwards of 16 per cent. on the capital invested in agriculture. In 1845, as will be seen, there will be a considerable falling off from the previous year. This is attributed to two causes: first, I planted much less cotton; secondly, I suffered greatly from the severe drought that has cut short my cotton crop one-third.

The first item of capital employed in agriculture is my farm, 1st of January, 1845, at $8,550. There is in cultivation on this farm of poor pine land, or sandy soil, 267 acres.

The present year, the following is the arrangement of the land:

In Corn,	120	acres.
" Cotton,	80	"
" Oats,	60	"
" Sweet Potatoes,	3	"
" Upland Rice,	2	"
" Garden,	2	"
	267	

The following notes of the time of planting the crop and the seasons, I copy from my book. At page 44, I find we commenced planting corn on the 26th of February. The land planted in corn quite broken. Planted in drills on the horizontal system; the rows six feet wide, the corn two feet apart in the rows: peas planted in the middle of the rows. At page 64, I find it turned quite cold, the corn planted on the 26th February, bitten down. On page 75, I find we commenced planting cotton on the 31st of March. The land planted in cotton is level; about half of it manured with compost manure, prepared by hauling into a lot where my cattle are penned, equal parts of the penned straw

and the blue marl, that abounds in this region. In putting in this manure, we have a deep shovel furrow. We scatter the manure in the furrow, and then throw up a bed on the manure, planting on the top of the bed. At page 100, I find the greatest want of rain, on the 26th of April. I find at page 125, that on the 2d of June, lice were preying on our cotton; that on account of the dry and cold spring the prospect was quite gloomy. I was absent from home from the 4th of June to the 16th of September, during which time but little rain fell. At page 148, I find that we finished hauling in my corn on the 27th of September, making 1300 bushels. We finished, the first week in October, picking out the cotton, making 35 bales; and as I make a most splendid article,

I value it at $40 per bale,.....	$1400.00
At page 187, I find that we have been 44 days hauling marl, at $2 per day,.....	88.00
At page 187, I find that we have been 24 days hauling straw, at $3 per day,.....	72.00
There will be 30 more days employed in hauling marl and straw, at $2.50 per day,.....	75.00
Other improvements on the farm,.....	100.00
	$1735.00

The expenses of the year I set down at $450.

ALEXANDER McDONALD.

Eufaula, Ala, Nov. 25, 1845.

CARROTS VERSUS OATS.

IT has been stated in the New York Farmers' Club, that a bushel of carrots cut fine by a root cutter is fully equivalent to a bushel of oats for horse feed in winter. If so, of how much importance is the cultivation of this crop to the farmer, who works horse teams, or keeps brood mares and raises colts? Of the comparative value of these two crops, I cannot speak advisedly in mild weather, and the horse moderately worked; but in cold weather, and the horse hard worked, roots of any kind are poor feed. Under these circumstances, a horse must have grain in our climate. I would leave it to the intelligent farmers to make experiments, taking into account the cost of each. This much we can do.

I have raised upwards of 800 bushels of carrots to the acre, but never raised over 56 bushels of oats; the whole of the work of cultivation of the carrots was done with harrow and cultivator, except the pulling up a few weeds with the fingers, where the two implements would not reach without injury to the carrots; making the labor of cultivating but little more than that of corn, except the harvesting. I always have found them an excellent feed for all kinds of stock, but especially for milch cows. For carrots as well as all other root crops, plow deep. Put in the subsoil plow, after the common plow, as deep as it will go, and manure highly, and I will warrant a good crop, let the season be wet or dry.

I once had an Irish gardener famous for large stories. He said while in the employ of a nobleman who was very fond of trying experiments, he dug a hole in the ground as big and as deep as a barrel; set a pole into the hole twelve feet long; then built a pyramid of earth round it, to the top; mixed the whole well with compost; pulled out the pole and filled up the hole with a rich loam, mixed with chemicals; planted his carrot seed, and when it had come up, pulled out all but one stand. This he watered with liquid manure through the summer, and, in the fall, he took away the dirt from the carrots. "And faith, Misther," added he, "sure it had grown to the bottom of the hole, twelve feet long, and as big as your thigh."

Your readers may believe as much of Patrick's story as they choose; yet, this is certain, that I have occasionally grown the Belgian white field carrots three feet long and 4 inches diameter at the top, in a rich, deep, alluvial loam. S.

SHIPPING SHEEP.

HAVING had occasion the past month to ship four beautiful Merino sheep from the Hon. Wm. Jarvis, of Vermont, to E. R. Brown, Esq., of Gallatin, Miss., the directions received from Mr. Jarvis for doing this were so judicious that we copy them into our paper as an excellent guide for all engaged in such business. He says:

Will you allow me to suggest, that I think they would go best in a pen of about 6 feet long and 4 to 4 1-2 feet wide, and about three feet high; to be boarded tight on the back, and both ends and top, with the exception of a door in the latter to put the sheep in and give them drink. In front there might be slats up and down about an inch and a half wide and 3 inches separation, one from the other, the slats to be a little rounded in the separation; the bottom to be slatted with slats of 4 or 5 inches wide, and about half an inch separation from slat to slat, to let the urine and dung through; but the separation must not be wide enough to let their feet through. There ought to be nailed across the bottom, three cleats, one at each end and one at the centre, to keep the pen from the deck, so that a bucket of salt water might be occasionally thrown under to keep the sheep clean and without wetting them, as being kept dry is essential to their health. In front a board of about a foot wide may be nailed at the bottom of the slats, but to slope out about 9 inches at the top, and secured at each end to make a manger to put the hay in: the bottom of this manger ought to be about a foot from the bottom of the pen. A small trough ought to be made at the end under the door to feed grain in; a salt water bucket, that is, a bucket bigger at the bottom than at the top, ought to be lashed in the corner of the pen under the door, and may be kept half full of water all the time to let them drink when they will —taking care to throw out the water when it gets fouled by their dung. This shaped bucket is much better than a common pail, as the water will not slop half so much out of it in the rolling of the sea.

They will require about 2 lbs. [we prefer 4 lbs. as considerable is wasted on board ship] of good hay each per day, and a pint of good oats. It would be well to agree with some of the attendants, or a faithful sailor, to see that they are fed with hay night and morning, and oats at noon; and for his attention to give him half a dollar or a dollar a head over and above the freight, if they all arrive safe.

Weathersfield, Vt., Nov. 17, 1845. WM. JARVIS.

To the above we will add, we have found by actual experiment, that large sheep like the Cotswolds, &c., will eat from 3 1-2 to 4 lbs. of hay per day on board ship; and allowing for waste, 5 lbs. per day, per head, should be laid in for the whole voyage.

LIME IN VIRGINIA.

UNDER this head we noticed an article from Mr. A. Nicol, of Virginia, on page 342 of your last volume, and should have replied to it sooner, could we have got the various analyses of our lime to do so effectually. We now subjoin such as have been made by Dr. Chilton, of New York, from average (not picked) specimens of the different strata of our quarries. Dr. Chilton is of opinion that the sample which Mr. Nicol speaks of being analyzed by Mr. Stuart, happened, unfortunately for us, to be an inferior specimen, or perhaps it had lain some time subject to air-slaking before being analyzed. By exposure to the air, burnt lime absorbs water and carbonic acid in the process of air-slaking; therefore, an analysis of such exposed sample will yield less lime per cent. than a sample fresh from the kiln. This is an important consideration. We now subjoin the different analyses:

	No. 1.	*No.* 2.
Lime	58.49	59.48
Silica	9.21	8.41
Alumina	5.36	4.23
Magnesia	11.81	10.34
Oxide of Iron	92	1.11
Carbonic acid, Water and loss	14.21	16.43
	100 parts.	100 parts.

	White Specimen.	Dark Specimen.
Lime	52.22	73.68
Silica	8.15	5.70
Magnesia	11.65	1.78
Alumina	13.98	3.70
Oxide of Iron		88
Carbonic Acid and Water	14.00	14.26
	100 parts.	100 parts.

The *white specimen* was analyzed Sept. 13, 1839; the *dark specimen*, Dec. 5, 1845. No. 1 and 2, Dec. 18, 1845. Mr. Nicol gave Dr. Beck's analysis, showing 92.75 per cent. of carbonate of lime, we therefore need not repeat it here. Dr. B. was one of our State Geological Surveyors, and analyzed the specimen from our quarry during his survey in 1839, in order to give it in his official report to the State; he would of course under such circumstances endeavor to be as correct as possible. We have numerous letters which we could produce acknowledging the superior merits of our lime, but after the above we think it unnecessary to say more. We are much obliged to Mr. Nicol for the handsome manner in which he acknowledges the beneficial effects of our lime on Virginia soil, and hope it may induce others to try it.

CALVIN TOMKINS & Co.

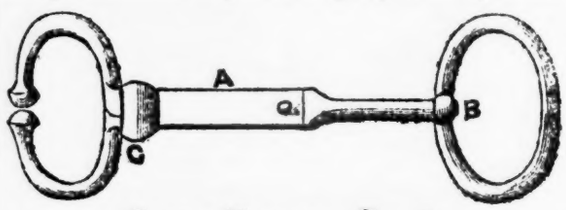
Peekskill, N. Y., Dec. 20, 1845.

To this communication of Messrs. Tomkins & Co., it may be proper for us to add, that they have left the original analyses made by Dr. Chilton, in our hands for inspection by any one wishing to see them; also commendatory letters of their lime, from those who have long used it. Dr. Chilton is considered one of the best analytical chemists in this city, and probably has not his superior in the United States. We have every confidence in his analyses being strictly correct, he being in daily practice of analyzing.

CATTLE HANDLER.

I HAVE been saved much trouble by the use of the accompanying little instrument for the management of unruly cattle.

This is simply a light bar of iron, A, about eight inches in length, with a ring handle of sufficient size to admit a man's hand, which turns on a swivel, B, at one end, and at the other end, a pair of calliper-shaped legs, one of which is stationary, the other opens with a joint, similar to the joint of a pair of common tongs. The fixed leg is inserted into one nostril of the animal, and the moveable one is bent into the other, where it is kept in place by a slide, which passes over a flat spring, at C. With this instrument a man can, with one hand, manage the most unruly animal, for the purpose of administering medicines, or performing any other operation.



CATTLE HANDLER—FIG. 3.

It can be made by any ingenious blacksmith (mine was made by William H. Rose, of Flushing), though care must be taken that the ends of the legs be blunt, and so contrived, as not to meet (a space of ⅛ of an inch between them, is sufficient), otherwise they would pinch the septum, or partition of the nostrils, and give unnecessary pain to the animal, and render him more restless.

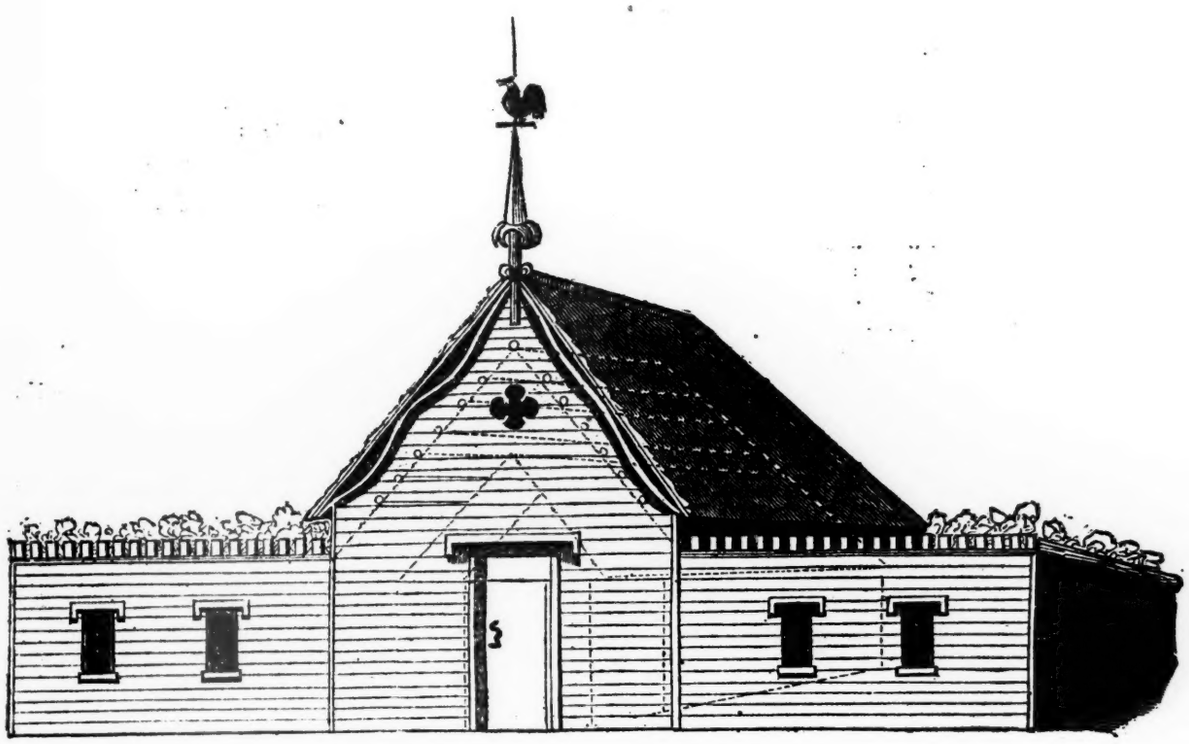
WILLIAM H. SCHERMERHORN.

Rose Hill, Flushing, L. I.

OVERSEERS FOR FARMS AND PLANTATIONS.—We are almost daily beset with applications for properly educated managers for farms and plantations, in different parts of the country—we mean for such persons as are up to the improvements of the age, and have the capacity to carry them properly into effect. If farmers' sons would qualify themselves for such stations as these, instead of going to shop-keeping, or running after some beggarly profession, both themselves and the country would be great gainers thereby. The following is a specimen of applications for overseers from the south, which we received the other day. We know not where to find suitable persons to fill these stations; we mean such as are qualified by education, experience, and skill.

"Could you recommend any one to me as a manager on my plantation? He will have upwards of 100 of my people in charge, including old and young. He must not only be well informed, but practically acquainted with the improved mode of agriculture in relation to raising the best crops of corn, wheat, grass, &c.; the management of horses, cattle, sheep, and hogs; be able to keep plantation accounts, &c., &c. To a person qualified in all respects to manage my plantation, I shall be willing to pay $500 per annum, provide him with a comfortable house to live in, provisions, and two servants to do his cooking and house service; a horse to ride, and besides some other little privileges."

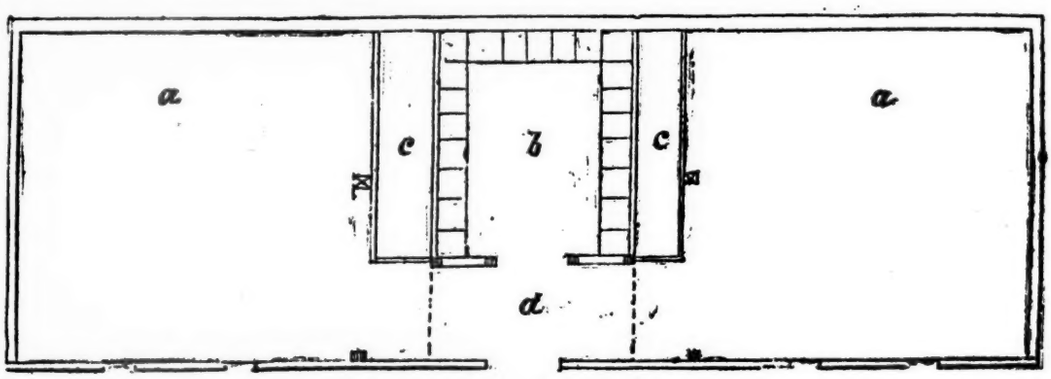
DESCRIPTION OF A POULTRY-HOUSE.



FRONT VIEW OF POULTRY-HOUSE.—FIG. 4.

BEING about to erect a domicil for the accommodation of my golden top-knots, I have looked through the American Poulterer's Companion in vain for a plan, that, in all particulars, suited my taste and ideas of what would be most agreeable to them; for I conceive taste and utility are not incompatible even in a hen-house. I have, therefore, made a plan to suit myself, which I enclose for your criticism, and if approved, it is at your service.

This poultry-house will accommodate 100 fowls in stormy weather. It is built on the side of a bank fronting the south. The posts of the centre building are 8 feet; those of the wings or storm-houses, 6 feet front, and 4½ feet rear; the depth, 12 feet, and the fronts of centre and wings 12 feet each, being just the length of the boards: the whole is well thatched. The roof of the nest house extends over the passage to the front, so that



GROUND PLAN OF POULTRY-HOUSE.—FIG. 5.

the droppings fall into the boxes placed outside of it for that purpose. The slat window in the gable is the ventilator. One, or both of the wings may be omitted, depending upon the wants or taste of the builder. Cost about $25, if built of rough boards.

a, *a*, Storm-houses, or promenades; *b*, laying house; *c*, *c*, boxes to catch the droppings off the roof of the laying house; *d*, passage ways.

If not built against a bank, I would have a cellar under one of the wings, for the laying hens in the winter; and instead of contiguous boxes, as is the usual practice, I am satisfied single boxes distributed about the house is altogether preferable. I prefer single nests to clusters.

WILLIAM LEAVENWORTH.

Long Branch, N. J.,

Horticulture in Holland.

THERE are few pleasures more truly enjoyed by the traveller than a visit to places long familiar to him from his earliest childhood; when scenes described in books of study, or the recreative reading of maturer years, come visibly before him with a pleasing reality, and bring thronging upon the mind many delightful associations of his early years. It was with feelings somewhat akin to these, that I found myself on board a comfortable steam-boat, and with only a few miles between us and Flushing, winding along the devious and lazy course of a Dutch river, on my way to the land of cleanliness and thrift, of canals and dykes, and of bulbs and beautiful flowers—the paradise of good housewives and florists.

Passing by Dort, and through a flat and meadow-like country, we reached Rotterdam in the evening, and were comfortably established in a good hotel. Before seven in the morning, maid-servants, mops, and force pumps were in efficient action against the windows; and wo to the luckless spider or fly that was caught unprepared. Looking-glasses were hanging at nearly every window, so ingeniously arranged, that every passer-by was visible to the occupant of the house, who could be screened from view.

Rotterdam is a stirring place, with fine docks and considerable shipping; and much of its prosperity is owing to the Dutch possessions in the East Indies. There are no nurseries of any note in the vicinity, and the common character of the flowers exposed for sale, evinced that it was not here that Holland could sustain her reputation in horticulture. There are a few small summer-houses in the suburbs, and some fruit trees trained as espaliers, or *en pyramide.*

These summer-houses are on the exterior of the town, and afford a good view of the green, level meadows which surround them. The gardens attached are frequently kept in nice order. The walks are laid with pounded bricks or shells, and edged sometimes with box or showy plants, and sometimes with low lattice work or boards, painted green. Neatness is their characteristic, and not a weed is seen. Mulberries and grape-vines are sometimes trained against the walls, and yield large profits to their owners. The fruit of one peculiarly fine mulberry tree, covering a whole house, has, in some years, been sold for nearly $200.

Rotterdam possesses in the Boomptie, one of the finest quays in Europe, inasmuch as it is lined with noble elms and limes, of more than a century's standing. During the summer, the Boomptie forms a favorite promenade for the inhabitants; the trees affording shade, while the river generally ensures a circulation of fresh and cool air. Here are the principal hotels, the windows looking out upon the Maese, a majestic river at this place, with vessels of every description frequently passing.

Taking a diligence for the Hague, we rode pleasantly along the banks of the canal, now covered with burden and packet boats. Small gardens, and some very pretty country seats, were scattered along the road. There was no want of water here, and it was frequently used in the way of miniature lakes, canals, &c. The approach to the Hague is delightful, and the chief beauty lies in the noble trees which border the roads in various directions for several miles, and unite in a mass of forest north of the town. Hague is decidedly the finest city in Holland; is the seat of Government, and possesses a beautiful mall, with some good public buildings. It is a favorite summer resort of the wealthier classes, and its principal hotel embowered in the thick forest, is at that season crowded to excess. From the Hague, the locomotive carried us with rapid strides to Amsterdam, that amphibious city of land and river.

Nowhere is the industry of man more perceptible than in this singular city, built as it is in the midst of a level marsh, and in danger of being overwhelmed by the waters which encompass it on every side. The streets are very narrow, and the canals emit a most offensive smell. In the vicinity, are some small houses, with neat gardens, to which the merchants sometimes escape from the noisome city. All the water drank in the city is brought from a distance in boats, and is pumped into the houses or cellars. Even this, however, it is difficult for a foreigner to drink, without vomiting, and I was obliged to take Seltzer water. There is a good botanic garden at Amsterdam, with a fine collection of plants from the Capes. The windows full of hyacinths and tulips, evinced the native fondness for flowers.

Returning to Rotterdam by railroad, we passed a few hours very pleasantly at Haarlem and Leyden. Haarlem has long been celebrated for its cultivation of flowers, and more particularly of bulbous and tuberous rooted plants. The cultivation of these and the numerous gardens, I have described more particularly in Hovey's Magazine, and their repetition here would occupy too much space. No traveller who feels the least interest in horticulture should visit Europe without seeing the "*bloemistries*" of Haarlem. The many acres covered with the rich and gorgeous bloom of the hyacinth, the tulip, and the crocus, in varieties whose beauty is scarcely known here, would leave upon his horticultural sense an impression not easily effaced. Haarlem, too, is well worth visiting, independently of its gardens. Its quiet character, and neat, clean, streets, impress the traveller agreeably.

Leyden is a short railroad ride from Haarlem, and is one of the prettiest towns in Holland. It is remarkably quiet, with the exception of an occasional group of noisy students belonging to the University, which once stood among the first in Europe. The Rhine passes through the city by various channels, and is crossed by nearly 150 fine bridges, many of them built of stone. Some of the houses are of a superior character; and many of the streets bordered with majestic trees, form noble avenues. Outside of the town is a pretty park, planted with trees and shrubs, and used as a promenade. The grand attraction of Leyden is the Botanic Garden, celebrated by its connection with Clusius and Boerhave. The inscription, in honor of the former distinguished botanist, was rather amusing.

"*Non potuit plures hic quærere Clusius herbas,*
Ergo novas campis quærit in Elysiis."

No more new plants the earth to Clusius yields,
He therefore seeks them in the Elysian fields.

The garden is subdivided by hedges in the formal style, is most excellently arranged, and contains many fine and rare trees and plants. A *Fraxinus ornus*, or flowering ash, is shown, which is said to have been grafted by Boerhave himself. It is grafted about a foot from the ground, upon a common ash stock, and the stem nearly twelve feet high is covered with numerous knobs, which produce a singular effect. In one of the houses was the "Palm of Clusius," a *Chamærops humilis*, 20 feet high, and about 240 years old, with about fifty other varieties. We were also shown a fine gingko tree, about 35 feet high. It yields its flowers every season, early in the summer.

I have seen no garden so well arranged as this. Great care is taken to bring together as much as possible, and classify in subdivisions all those plants which belong to the same natural family. One house is appropriated to aloes, of which there is a large collection; one of the American species is 100 years old. The Cape plants are kept in a separate house, and number many fine varieties; the *Chorizyma* with its small orange and scarlet flower, and the *Photea argentea*, with its silvery foliage. A fine specimen was shown of the *Pandanus utilis* from Mauritius, and the *Pinus lanceolata*, a beautiful new pine from New Holland. There was a collection of *orchideous* plants—100 species of cactus, 70 kinds of figs, and a *salicetum*, containing 70 species of willows. The plants used in medicine are grouped by themselves, and all the herbaceous plants are arranged according to Linnæus. Farther improvements are making in the ground, and the Leyden Botanic Garden will soon have, if such is not already the case, few rivals in Europe. We certainly saw nothing of the kind on the Continent, which pleased us equally well, and no garden there, excepting perhaps that of Padua, could compare with it for excellence of arrangement.

In the vicinity of Leyden are many villas; but no pleasure grounds worthy the attention of a visitor. They are all in the same taste; both house and garden are hidden by rows and small groves of trees, or by tall evergreen hedges. The meadows in Holland exhibit luxuriant vegetation. and it is from these old pastures that Dutch butter has derived its celebrity for richness of flavor. These are seldom pastured by cattle, and the soiling system is generally practised. Land of indifferent quality is rented in Holland at 15 guilders, or $6 per acre, and the best at $60 the acre, besides the heavy taxes for the support of the dykes, &c. Holland was well characterized by Sir William Temple, when he said:—"It is like the sea in a calm, and looks as if, after a long contention between land and water which it should belong to, it had at length been divided between them." The greater part is in meadow, and some good wheat is occasionally produced. The soil, however, could scarcely be deemed rich. In some places it is scarcely better than sand, tinged with alluvial deposit. In other places, muddy deposits have formed over the sand, making a clayey soil of no very excellent character. Here is seen strikingly evinced, what industry, perseverance, and high cultivation will do; for although her soil cannot compete with the German States, in the production of grain, yet the meadows of Holland and her dairies may well compete with the far-famed Devonshire cream, or our own Orange county butter.

S. B. Parsons.

Flushing, Long Island, Dec. 16, 1845.

American Agricultural Association.—This Association held its regular meeting on Wednesday, the 3d of December last. The President being absent, the chair was taken by Doct. Alexander H. Stevens, one of the Vice-Presidents. The night being very stormy, there was but a thin attendance. The minutes of the last meeting were read and approved. Dr. Field stated that he received last spring a specimen of spring wheat, of a superior variety, from Mr. Hays, of Montreal, with the understanding that it should be sown, and the result communicated to the Association. The wheat was sown in drills, nine inches apart. It came to maturity in good season, produced a fine berry and strong straw. It would be sown again next year, when it was hoped that there would be a sufficient produce for distribution among the members of the society.

Mr. A. Stevens, in pursuance of an invitation at the November meeting, exhibited some casts and pictures of cattle, and made some remarks in relation to them, and stock in general. Some informal conversation then followed among the members, when the meeting was adjourned.

A Productive Farm.—The New England Farmer, in giving a brief extract from the account which has been going the rounds of the papers, of Mr. Gowan's farm, near Philadelphia, says, there must be some "guessing in stating these quantities of products as common yields." Perhaps there might have been; but I must be allowed to know something about Mr. Gowan's farming operations, having spent several days at his hospitable mansion, and had an opportunity of looking over his farm book. I have no doubt of the accuracy of his accounts. I saw the milk measured from day to day, from one of his Durham cows, which was 31 to 31½ quarts per day. I wish every farmer in the United States could see Mr. G.'s crops when they are gathered; they would think if there was any "*guessing*" in the matter, it was rather *under* than *over* their actual value. Samuel Allen.

New York, Dec. 17, 1845.

Cattle Yards.—Keep the bottom of these as dry and comfortable for the stock as possible, so that when it thaws or rains, the animals will not be obliged to stand in the mud. Cattle yards should always be well littered. Litter adds largely to the manure heap, and not less to the comfort of the stock. Don't complain that you have no litter; look about you and you will find it.

When not to take up a Tree.—An experienced transplanter of trees says, it is a maxim with him never to take up a tree while the sap circulates, as it will be more or less detrimental to it.

DAVISON'S INVENTION FOR CURING PROVISIONS.

CHANCE, a few days since, took me to the packing house of Mr. Davison, in Leroy street in this city, and I there saw the apparatus invented by him for the salting of meats. This invention is so important to the agricultural world, that I am induced to call attention to it.

Mr. Davison, prior to his present occupation, was long connected with the manufacture of salt; and having resided at one period in South America (a country with greater capacities for the production of the hog and the ox than any other), he had his attention very naturally turned to the subject of the preservation of meats. The invention now put into perfect operation by him is the result of his observations in his earlier pursuit, and much thought and investigation. Endowed by nature with an inventive genius, and having had the benefit of a good education, together with the scientific advice of Dr. Lardner, whom he consulted upon his arrival in this country, in reference to this subject, he perfected the invention by reducing it to reality and successful operation.

The whole apparatus is perfectly simple. It consists of a large cylinder made *air tight*. It has a mouth-piece through which the meat is put into the cylinder. On this mouth-piece is fitted a lid, with its surface so adapted to the mouth-piece that no air can pass. Strong screws bind it close to the mouth-piece. On the lid are two air vents with screws to open and close them. This cylinder, mouth-piece, and lid, are made of the best of iron, with a thickness proportional to their size.

There is also a large vat to hold brine. This is made of wood, and is elevated above the cylinder, and connected with it by a pipe. Through the pipe the brine passes from the vat to the cylinder. There is a lifting pump attached to the cylinder. By it the brine is pumped from the cylinder into the vat.

The meat, being first cut, is placed in the cylinder and the brine admitted. When the cylinder is filled with the brine, the lid is closed down on the mouth-piece and screwed fast. The pump is then put into action and the brine carried back to the vat. When the brine is all removed from the cylinder, the meat is in a vacuum; this is obvious, for the brine had of course expelled the air; the cylinder and closed lid, being air-tight, did not permit the air to return when the brine was withdrawn. The meat, being in a vacuum, parts with all the blood, air, and gases which may be contained within it —these escape into the vacuum of the cylinder. The brine is now again introduced, and when the meat is covered, the air-vents in the lid are opened, and the brine drives out all the air and gases which had escaped from the meat. When the cylinder is full of brine, the air-vents are closed, and the brine is pumped into the vat, and the meats are again in vacuum. Again blood, air, and gases escape into the vacuum. The brine is again introduced, and the meat covered; the air-vents are then opened and the air and gases escape from the cylinder, and the cylinder is filled with brine. The brine is withdrawn and returned again and again until the operation is completed. The interval of withdrawing and returning is short at first; but when the blood, air, and gases are expelled from the meat, the brine is allowed to remain on the meat for some hours, say four to eight. After the blood, air, and gases are expelled, and the meat has remained in the brine for six or eight hours, it is cured. The whole process will require about twelve hours.

The principle on which the method acts is that of a pressure upon the meat in a vacuum. In its ordinary condition the meat is filled with blood, air, and gases; when immersed in brine, in the ordinary process, these, by their resisting power, prevent the brine from entering the meat; the blood has an affinity with the brine, and leaves the meat to unite with it. The pressure of the water and its specific gravity being greater than that of the air and gases, the air and gases rise to the surface and escape, and the brine takes their place. To do this, however, takes time, and about six weeks are found necessary to accomplish it. When, however, the meat is in a vacuum, the blood, air, and gases *escape at once;* being escaped, the brine exerts its pressure, and the meat is charged at once. This pressure in the ordinary method of curing is nothing more than that which arises from the weight and pressure of the quantity of brine necessary to cover the meat. In the cylinder, the meat, when the blood, air, and gases have been separated from it in the vacuum, can be subjected to an illimitable amount of pressure. To do this, nothing more is necessary than the elevation of the vat. Connected as is the vat by a pipe to the cylinder, the pressure is in proportion to the elevation of the vat. By means of the vacuum the meat is freed from all the means of resistance to the entrance of the brine; and the pressure of the brine may be carried to any extent that the meat will bear without collapsing. When in vacuum it is swollen, its fibre distended and pores open, and it readily admits the brine even at the simple pressure of the mere quantity of brine which the cylinder will hold. In this matter, experience has taught that the pressure of a single atmosphere is the most effective; a greater one tends to close the pores of the vacated meat, and a triple atmospheric pressure completely closes them, to the exclusion of the brine. The whole secret of the action of this method is, that the vacuum fits the meat at once to admit the brine; and the pressure, if not too great, at once forces the brine into the vacated pores, and this done, the meat is cured. By the use of the vacuum, the natural process is shortened from weeks to hours, and the meat is cured *at least as perfectly;* indeed far more perfectly.

Such is Mr. Davison's process. He has patented it, and deserves, for his ingenuity scientifically applied, to reap a rich harvest. Rich as it may be, it will be but the faint shadow of the one to be reaped by this great meat-raising, curing, and eating country.

The advantage of a *rapid* curing of meat in a perfect manner, is obvious to every one. But there are numerous advantages beside. Let me enumerate them.

All meats salted and cured in the ordinary method, require two packings to pass inspection, and for family use. When the meat is cured, which will be at the end of six weeks or two months, the brine is bloody and foul. In the large packing and inspection establishments, the meat is re-packed, and the first brine is thrown away. With the vacuum process, the meat

when cured, at the end of twelve hours, is free from blood, and ready to receive its final packing, fit to pass inspection, or keeping for family use. In the process of curing, pork increases in weight, ten to eleven per cent. In the ordinary process, two months are necessary to gain this; and of course, the interest, storing, and insurance, for that period are lost to somebody; in the vacuum process the meat is cured in twelve hours and the ten per cent gain is *obtained at once*, and there is no loss of time, interest, storage, or insurance. In the ordinary method, the packer cannot sell profitably until after two packings and two months of time; in the vacuum process he may sell in one day, reaping the gain of the increase.

The longer the meat is in curing, the more the natural juices are extracted by the brine. Hence, when the meat is cured equally well as to its being saved, its quality will be better in the short process, for its juices are not lost in the brine.

These advantages apply to all seasons of the year, and by the vacuum process there is a great gain, even in the winter, when meat can be cured by the ordinary process. But there is yet another advantage, and it is this:—

Meat, by the vacuum process, may be cured in summer as well and as perfectly and safely as in winter; once in the cylinder, it is safe. The cylinder will make it so at once, under any circumstances; but, if necessary, the cylinder may be enclosed in a wooden box (a non-conductor), and the space between case and cylinder filled with powdered charcoal. This at once makes a refrigerator, and with the brine, a temperature approaching freezing point may be maintained during the whole time of curing.

In the West, less capital for the purchase of meat will be necessary if the vacuum process be adopted, for time, interest, storage and insurance will be saved. But to the West it will give yet another advantage; it will enable them to commence packing earlier. Not unusual is it for them at Cincinnati and St. Louis, to be closed up in December with ice, and a stop put to shipment. If packing can commence in October, the loss of cold weather in feeding and the staying power of ice will be obviated. A hog or a beeve is fatted more easily in warm than in cold weather. But neither can be killed and cured in warm weather by the ordinary process; by the vacuum process they may. To pack in the ordinary way you must feed longer, and that even with a scarcity of food, to get to the cold weather, that you may safely cure; and by no means can you meet a present demand or a rising market. By the vacuum process, you obviate long feeding, warm weather (and that may occur even at midwinter to spoil meat cured in the ordinary mode), and you may meet a present demand or a rising market, without loss of interest, storage, or insurance. It may be objected that there is an expense in the vacuum process not incurred in the ordinary one. In the ordinary process you cure and wait two months, and then repack for inspection or to keep for family use. In the vacuum process you cure and pack, and are done; and the two packings of the ordinary mode are more expensive than the curing and packing of the vacuum process. Hence there is economy in capital and outlay, in time and expense subsequent to the first packing. To this is to be added, that the meat is better on account of the retention of its natural juices in a greater degree. Here all comparison between the two methods ends. The advantages of the vacuum process, beside, are all its own.

Hitherto, when meat got skippered or tainted it was lost:—now it can be saved. If skippered, when placed in a vacuum in the cylinder, the skippers come to the surface of the meat, and perish for want of air. The meat is then taken from the cylinder, the skippers removed, and the meat returned to the cylinder and again charged with pickle, and is again perfect.

If meat be tainted, it is placed in the cylinder and charged with a weak solution of lime; taken out, dried, and returned to the cylinder, and again charged with pickle: and then it is difficult to distinguish it from sound meat.

Hams and bacon, old, blackened and spoiled in appearance, will not take in pickle by immersion: subjected to the vacuum process they may, and in a few hours, be restored to fresh appearance, and after smoking, be equal to new ones.

Meat just killed and *warm* may be put, in midsummer, into the cylinder, and cured in twelve hours perfectly. By steeping it cannot be cured at all in warm weather; in vacuum it may be at all seasons.

Beef cured in the vacuum is done and packed in a day, and has gained its full increase. Cured by steeping, it at once loses five per cent, and takes months to regain its loss and add the usual gain arising from packing.

In hot climates, meat cannot be cured by steeping at any season; by the vacuum it can in any climate at all seasons.

As in ordinary packing, sugar, spices, or acid, may be added to the brine; but in the vacuum process they will be more perfectly taken up, and the meat more highly flavored.

The vacuum process is applicable to all kinds of meats; and all kinds of fluids may be infused into meats by it. A variety of antiseptics beside salt will preserve if they can be injected into meat; but before the meat could take them by steeping, it would be spoiled in any weather but the coldest, and in the coldest would be stale first. By the vacuum these may be injected at once, and the meat flavored by these peculiar preservative fluids.

To the West, it offers great facilities and economies, as the West is now the great meat grower and packer.

But this invention is truly a great boon to the people of the South. They now bring their pork and beef from the west. Hereafter, they may cure it for themselves. Now, they cannot, with a certainty of keeping, even in winter. With Mr. Davison's process they may cure at all seasons. Hereafter, they may cure with safety and economy. They may thus become, not only their own pork and beef growers, but they may add pork and beef to their exports. Indeed, in time, it may fairly be predicted that the region of country on the gulf of Mexico will be the only country that can export pork and beef profitably. Her climate will grow it without expense, for her pastures are ever green; and her fields may ever be filled with pork-fattening esculents. In no region does a good hog do

better than in a warm one. In the cotton and sugar region every planter may himself make all his bacon, for he is now able to cure it.

To families of farmers, living in the country, it offers the means of having fresh meat during the summer without waste, for what cannot be eaten fresh can be packed, and will be the best pickled meat, as it will be recently cured.

There is yet another view in which this invention will wonderfully serve farmers and planters. By it they can impregnate wood with salt, and the wood will be indestructible; or may turn it to stone measurably, and it shall yet be flexible, and can never rot and only be lost by wear. By it shingles for houses, and posts for fences, may be made indestructible. To do this it is only necessary to impregnate them with brine thoroughly. But it may be carried still further, and the wood turned wholly to stone; and thus—the wood is first charged with salt, then with sulphate of iron, and dried, then charged with a solution of muriate of lime; this latter coming in contact with the sulphate of iron, decomposes the wood and forms an insoluble compound—sulphate of lime or gypsum. The wood then becomes stone, and yet retains toughness.

The chief merit of this apparatus is its extreme simplicity and the economy with which it operates. The solution of salt, or brine, which is used in most cases, both for curing meat and wood, is not costly. No more of it is expended than the meat or wood takes up; the balance is returned to the cistern and serves for another, or other operations. If a little sweetening matter or spices be added, the cost is not greatly increased, and for the other operations contemplated upon wood the same applies, for most of the required solutions are made from the cheapest ingredients. The apparatus, constructed of metal, will last for centuries. If it should get out of order, the rudest mechanic in the country can put it to rights. A boy of fourteen years of age can work it as well as a man. In fine, although many of the principles involved are not new ones, yet it so happens that no other apparatus heretofore invented rendered them of public utility, on account of great expense, while by this one, they can be made *practically, cheaply useful.*

Such are the benefits which will arise to the agricultural world from this invention. Of its power to serve commerce in ship-building, in the construction of railroads, bridges, &c., it is not here necessary to speak.

All that has been stated, is the result of actual experiment, and may be daily witnessed at Mr. Davison's packing establishment in Leroy street near West, and the truth of these representations tested. A view of the apparatus will surprise and gratify far more than the statements here made.

New York, Dec. 16, 1845. A. S.

We commend the above article on curing meat to the attention of our readers. By Mr. Stevens' request we examined the machine in question, and found it more than he represents it. We think the invention invaluable. Having received occasional letters of inquiry in reference to it, we have been induced, since Mr. S.'s article was written, to make an arrangement with the patentees to sell machines and rights to the States, or if desired, to smaller territories. In doing this we are persuaded we shall serve the public vastly more than ourselves. For prices see advertisement.

TWO ITEMS ABOUT HAY.

The extraordinary drought of the past season, in most parts of our country, has compelled many farmers to resort to some unusual expedients to procure a supply of provender. One of these I wish to bring to notice, as it may be of some use among the various "substitutes for a short crop of hay," offered in the public prints.

In the northern States, few sections, probably, suffered more severely than the northwestern part of New Jersey, comprising the county of Sussex and the adjoining portion of Warren. Much stock has been sold, and for the remainder, the prospect is, that they will have to "pick clean and close," for seldom do we find a more complete failure in the hay crop. Some never mowed their meadows at all, and those who did, got but a slim return. A friend of mine, in journeying through Sussex county, came across one farmer, whose grass crop presented about the same hopeless appearance as the rest, at the usual time of mowing. And what did he do? give it up in despair, and turn his cattle in to pasture according to the fashion? Not he! He said he always made it his business to save fodder. It was a prominent feature in his system of farming. Save it in the summer time—save it in the winter time—and *save* it at all times. If the "early rain" had failed, he had faith that the "latter" one would come. So he waited, and come it did, and with a heavy crop of hay, of two tons to the acre, cut and housed in the month of November. "In the month of November!" no doubt some will exclaim with surprise. Exactly so, friend reader, although perhaps had you passed the field when the mowing was going on, you would have been inclined to ask, with a smile, "Mister, what time this year did you commence, that you have got no further along than this, in your operations?"

But enough of this. Let us learn something by the way; and be you our teacher, Mr. Editor. I would ask, could such a result as this be depended on generally, under the like circumstances, or only on some certain soils or situations? What would be its effect on the crop of next year? It would probably be a little later; would it be just as good? Would it leave the roots more open to the killing action of the frosts, and cause the grass to die out and thus make it necessary to seed the land over again? Would the soil deteriorate under such treatment, or the reverse?

I would also take this opportunity of calling attention to another item in the treatment of grass lands, given on page 151 of Mr. Ellsworth's agricultural report for 1844. It is a novel and curious doctrine, and I should like to know the principles on which it is grounded. It reads as follows: "I will take an old piece of herdsgrass, that at present yields less than half a ton of hay per acre, and at the end of five years, without breaking up, fresh seeding, or manuring, in any way whatever, I will raise the crop to two and a half tons per acre; and this I will do by merely permitting the crop to stand until the seed will just vegetate before cutting." And the writer goes on to state, that he act-

ually did this; having unintentionally been delayed in cutting his hay, till in the stage above mentioned, when he says he got better hay than that cut at the usual time along side of it; and at the end of five years, the gradual improvement in quantity reached two and a half tons. He accounts for it (the increase in quantity), by supposing that, when cut in its green state, the roots bleed and die out. But here is something very inconsistent with the prevalent theory on this subject. First, the quality of the hay is generally thought to be better when cut in a green, juicy state, and that if left till ripe, the hay becomes hard and woody, and difficult of mastication and digestion. But this man's experiment leads to a different conclusion. Second, he claims an increase in quantity. But the common theory is, that the oftener vegetation is cut off (under certain limits of course), the more young shoots will appear from the old stocks, and the strength of the soil, not being required to ripen the seed, will cause them to grow more luxuriantly. Third, an extraordinary improvement of the soil is also stated. But vegetable physiologists say that the greatest exhaustion of the soil takes place during the ripening of the seed. Therefore, the soil would have less taken from it, were the hay cut before this time, and of course its improvement be more rapid under any restoratives that might be applied to it. Therefore we conclude, that the results are to be ascribed to the peculiarities of the season, or some other cause than the cutting at the particular time stated.

Yet, the writer's confidence in his discovery is so great that he says he will "take a poor field, that shows only a few spears of timothy growing in it, and by these simple means engage to cut two and a half tons per acre of superior hay." And so he might, but his success would be owing to something else than that to which he ascribes it. One prominent reason I will mention in conclusion. Professor Johnston mentions in his lectures, that in the fourth or fifth year of a grass crop, the quantity of vegetable matter in the roots, is four times that contained in any hay crop that could be taken from it in any one year. The continual decay and decomposition of these roots furnish the means of increased fertility; and hence the ameliorating influence of laying land down to grass.

A. R. D.

Hackettstown, Warren Co., N. J., Dec. 18, 1845.

Our correspondent shall be answered next month.

RAISING SHEEP AT THE WEST.

An opinion has been very prevalent for a long time at the East, that sheep can be fed nearly throughout the year on the natural pastures of the prairies. Though we have never entertained this opinion ourselves, yet we have been unwilling to speak of it, without more definite information than we have hitherto had. We have made extensive inquiries on the subject recently, and have further testimony of some authentic written sources, and particularly from the editor of the Prairie Farmer, which induces us to state most explicitly, that all such opinions are entirely unfounded.

The herbage on the rolling prairie, is frequently of a choice quality for grazing purposes, abounding as it does, in a variety of nutritious grasses, the wild pea, &c., &c. But this does not usually spring up in sufficient abundance to afford a full bite before May, and the first severe frosts of autumn injure it to such an extent, as to make it entirely worthless to sheep. A few days' pasturage on it, in this condition, will kill off sheep as rapidly as rot. Excepting some three or four of the summer months, then, the prairies are worthless as sheep-walks, and other sources than the natural pastures must be provided for them. This can only be done by preparing sufficient pasturage from the cultivated grasses. On these they can subsist as on similar pastures elsewhere; but the rigors of cold weather will render ample provision necessary for the late fall, winter, and early spring months, as with us. Good grass, straw, pea or bean vines, grain and roots, are just as essential to the health, thrift, and production of sheep on the prairies, as in similar latitudes at the east.

The profits of sheep-raising at the West must, therefore, be reduced to an approximate level with those elsewhere. Then the low price of land is in their favor; here, proximity to market, and the higher price of mutton, give us a decided advantage; and the improvements made here in fences, roads, buildings, &c., may well nigh neutralize the difference in the first cost of land. Certain it is, that the advantages of sheep-raising in the West are not such as to alarm our Eastern shepherds, from an apprehension that their business will be taken out of their own hands. It is now, and probably will continue to be a lucrative occupation with our Western husbandmen, and as such, should enter largely into their arrangements; but its monopoly can nowhere be secured, we believe, on this continent.

ANNUAL MEETING OF THE N. Y. STATE AGRICULTURAL SOCIETY.

The annual meeting of the New York State Agricultural Society will commence its session in the city of Albany on the 3d Wednesday (21st) of January, 1846, and continue two days.

The meetings for business will be held at the State Geological Rooms, commencing at 10 o'clock A. M., on Wednesday.

A public meeting will be held at the Assembly Chamber of the Capitol on Wednesday Evening, where there will be a public discussion of subjects interesting to agriculturists.

On Thursday evening, the annual Address will be delivered by the President of the Society.

Farmers, and the public generally, are invited to be present. L. Tucker, *Rec. Secretary.*

Save your Hay-Seed.—Many farmers never think of saving the offal from the cattle or horse manger, but throw it away, or into the manure heap. In either case the seed is lost, and in the last it becomes a great nuisance, if the manure be applied to hoed crops. We saved sufficient hay chaff one winter from feeding twenty-three head of animals, to stock down ten acres of meadow. Before sowing it we were careful to pick out all the weeds.

PAULOWNIA IMPERIALIS.

Extract from the Annals of the Royal Society of Horticulture of Paris, on the subject of the flowering of this new ornamental tree, imported from Japan, as reported by M. Newmann:

"I have the honor of informing the Royal Society of Horticulture, that many of the buds of the Paulownia Imperialis, on the tree growing at the Museum of Natural History, which were formed the last autumn, and which consequently have sustained the rigor of the past winter, are at this date (April 29th) expanded into perfect flowers of a bright blue color, very much resembling those of the gloxinia caulescens. They are large and remain for many days. There are seven or eight combined in each erect panicle, around which they are suspended, and they exhale a sweet and agreeable odor. During the period when these flowers are developing their beauties, the foliage also expands, giving to this fine tree a magnificent appearance. It is a phenomenon altogether new for flower buds to be so well preserved during the winter, after having been so perfectly formed. The blue color of the flowers of the Paulownia is a peculiarity which will cause it to be greatly sought for by amateurs. This much admired tree, which grows with astonishing vigor, has formed shoots during the third year of its growth, more than ten feet in length, with leaves twenty inches in length, and twenty-two in breadth; and when growing in quite indifferent soil such as the Jardin du Roi. At Versailles, Mr. Massey has planted some trees in peat soil, one of which has formed shoots thirteen feet in height in a single season. This tree is called in Japan 'Kiri,' and a genus has been formed of it under the title of Paulownia, in honor of her Imperial Highness, the hereditary Princess of Holland.

"It is not for the beauty of its flowers alone that this splendid tree has been dedicated to this Princess, but it is for the additional circumstance that the leaf of the 'Kiri,' adorned with triplicate branches of its flowers, has long served as the emblem of the renowned hero 'Faikasama,' who is still held in the highest veneration by the inhabitants of Japan."

I send you the above translation, supposing it might be acceptable to many of your readers.

Wm. R. Prince.

Prince's Linnæan Garden and Nurseries,
Flushing, Dec. 10, 1845.

HOGS RUNNING AT LARGE.

It is an old adage that "wonders will never cease;" and certainly we have no stronger illustration of the proverb, than is to be found in the almost universal practice of allowing swine to run at large. There ought to be a State law against it, and we would that it could be made a *national one*, that not a swine in the Union should be allowed to set his foot on other than his owner's premises. Such a law, however, unless it was confined to the *quadruped* division of the species, might result in thinning off the population of some of the emporiums of politics and official distributions, and other places of frequent resort; yet it is probable, with an equal advantage to the public, as the restriction of "the larger liberty" of their bristly compeers.

I can see no one advantage, even to the owner, in allowing a swine to go at large. His only resources are two—the garbage he may occasionally pick up, and the plunder he may secure from the neighbors' fields, gardens or store-houses. The first will be just in proportion to the filth of the neighborhood; yet it is unaccountable, that those who manufacture garbage, should not have it consumed by their own swine, and on their own ground. If it be good for anything, it is good for them there, and if not convenient to be fed at home, let it be converted into compost, or disposed of to their neighbors for feeding.

As to the other resource, the plunder from their neighbors, this is of a perfectly piratical character. Any man who turns his swine into the road with the expectation, or even probability, of their intruding on another's premises, may with more propriety go himself, and steal an equal quantity of grain, vegetables, meal or pork. The last is altogether the most respectable and economical mode of accomplishing a given object. This he does openly and above board, and takes only what can be judiciously used; while the other is taken by a sneaking, filthy, disgusting agent, who is sent on an errand, his owner is somewhat ashamed, or more probably, *afraid* to undertake personally; and who, in the accomplishment of his mission, gormandizes frequently to his own injury, eating enough at once, to last a more considerate hog two or three days; and like many of his biped kindred, trampling, soiling, and wasting what he cannot use.

The annual expense of fencing some villages against hogs, and the injury done by them in spite of all hindrances, is several hundred dollars—enough to buy half the pork consumed by the inhabitants; and all this inconvenience is suffered and put up with, that some few hoggish individuals may allow their brother swine to enjoy a free range.

If there were any advantage to the owner in this practice, besides the robberies his swine accomplish, there would be some compensation in it; but there is none. The hog that rambles abroad is subject to injury from dogs, men, carriages, and locomotives, while his gain is not equivalent, with all his filchings, to make up to his carcass the waste of his extra exercise. Any man who keeps a hog or hogs should, both by statute and public opinion, be compelled to "circumscribe the area of their freedom" to their own pen, for his own interest, as well as for decency's sake. So repugnant to a reflecting person's feelings, is the result of a hog's rambles in a neighborhood, that we have known an otherwise pretty and thriving village or town, deprived of some of its best occupants in consequence of being compelled to share its pleasant walks and shaded avenues with such company. Quirk.

Preserving Poultry and Game Fresh.—This delicious meat, and even small sheep, may be kept fresh two months of the winter, by first cooking, and then hanging them up to freeze in a cold room. Freezing makes the meat more tender, and it also partially absorbs the spices of the stuffing, and becomes very delicious in its flavor in a few weeks. Poultry, &c., may be preserved by having the insides taken out, and charcoal dust put in their place, and then hung up as above; also by putting it down in cold lard.

Ladies' Department.

COUNTRY LIFE.

"Oh Winter! ruler of the inverted year,
Thy scattered hair with sleet, like ashes fill'd,
Thy breath congeal'd upon thy lips, thy cheeks
Fring'd with a beard made white with other snows
Than those of age; thy forehead wrapt in clouds;
A leafless branch thy sceptre; and thy throne
A sliding car, indebted to no wheels—
I love thee, all unlovely as thou seem'st,
And dreaded as thou art!" COWPER.

AT this season, when the thronged streets of our cities look like summer flower gardens, or with richly tinted silks, and splendid stuffs of every hue, bedecking winter in all the gorgeous colors of an American autumn, those who do not love Nature for her own sake, may contrast these gas-lighted streets, and the ever moving crowds, with the leafless trees, bleak fields, and rugged walks of the country; and wonder how any one, left free to choose, should stay from the delights of a city life a single day after the fall of the first leaf had rung the knell of departed summer.

We will fancy some of these gay young butterflies of fashion, whose ideas of the country were gathered in an occasional ride, or during a railroad excursion to some watering place—on calling to remembrance one of their favorite companions, whose *cruel destiny* had united her to the man of her heart, and fixed in the country—half in pity for her solitude, and half for the sake of a frolic, they agree to make her a visit, and spend a day, a *winter's* day, in the country. A bright sunny morning was chosen, and as they drove rapidly over the well beaten road, their spirits exhilarated by the pure healthful breeze, they could not help expressing the admiration they felt for the snow-capped hills, with gigantic icicles hanging from every rugged rock, and the picturesque groups of merry skaters on every little frozen stream, with their odd-fashioned fur caps, and scarlet and blue comforters.

They found their friend with her excellent husband and fine children well, and delighted to see them; were ushered into the cheerful parlor with affectionate haste, and warm welcome—sincere as warm—for out of the chilling influence of fashionable life, where the feelings are too often frittered away upon crowds for whom one cares not, the heart has room to expand, and love dearly where it loves at all; and closely does it enfold the favored few who find footing there. The morning passed quickly and merrily away in admiring "Cousin Mary's" winter arrangements, and talking over old times and scenes. The plentiful, but unfashionably early dinner, the produce of their own farm and dairy, was served with exquisite neatness, and excellently dressed; they did not know how, for the short absence of their charming hostess had not been noticed. They visited the dairy, and pronounced it perfect; the poultry-yard, Mary's peculiar care; and the small but well-filled green house, which opening from the parlor, imparted, by its tasteful arrangement, an air of elegance to the handsome room. The loveliest flowers were gaily plucked to be carried to town as trophies of their pilgrimage to "the country;" and while preparing to return in time to allow the young moon to light them home, they truly declared, they had never passed a happier day—and promising to "come soon again," took a merry leave of their hospitable host and hostess. While sweeping round the lawn and through the fine old avenue of giant oaks, they agreed that Cousin Mary had not made such a bad choice after all, for with such an establishment, even winter in the country might be tolerated!

This was the bright side of an unknown picture, and they had not gone far before the scene changed. Huge masses of clouds obscured the horizon, and threatened a storm; the bright noon-day sun had thawed the roads, through which the heavy wagons had ploughed deep ruts; and these a keen frost had hardened into frightful jolts, in going over one of which a spring broke, and the gay party were obliged to walk to the nearest smith, where they waited, shivering in the cold night air, until the carriage was brought up and repaired. By the time they were again on the road it was dark as Erebus—not a star to be seen; the moon had gone down, and the sharp wind blew the fast falling snow in their faces.

At last they reached home, where Papa and Mama had become uneasy, and were waiting their return in anxious impatience, blaming them for staying so late. Chilled and out of humor they took their tea, and then related the chapter of sad accidents. The sisters were frightened, and the brothers came to the conclusion that they would never be again entrapped into the country in cold weather; "the town was good enough for them." All the charms of the country had vanished, and they declared that it was a shame for such a pretty girl as Cousin Mary, so clever and well educated, to be buried alive in that way; and that she had made a great mistake when she threw herself away upon a farmer, who would not spend the winter in town. They acknowledged that he had received a classical education, and was an intelligent, generous, and fine-looking fellow; but to live *out there* was too bad.

But what was *poor* Cousin Mary doing all this time? As soon as her guests had departed, whose sacrifice to friendship she by no means appreciated—how could she when she was so stupid as to love the country for its own sake, as well as for that of the *clodpole* she gloried in calling her husband—she returned to her parlor, arranged the tea table, closed the curtains, and then by the bright light of the fire, in the fulness of her happy heart, she romped with her lovely boy; sung her sweet baby to sleep, and sat down to wait until her husband should come in to tea. Presently he came, glowing with health and happiness—and shaking the snow from his hair, predicts fine sleighing on the morrow. They talked long and earnestly of the visit they had received, and good-naturedly, but sincerely regretted that their young friends, who they thought were made for better things, should be doomed to waste their energies in a city life; while they congratulated themselves upon their own far happier lot. The day's cares were over; the table drawn closer to the fire; the lard lamp diffused its clear, soft light through the spacious room, while with reading, music, and cheerful, instructive conversation, the evening glided imperceptibly away. The wind whistled around the house and groaned in the trees;

but the storm was unheeded by them, save when they thought of some neighbor less comfortably protected from the inclemency of the season. For their own lot they were thankful; there was a deep felt sense of gratitude for their many unmerited blessings; "a sober certainty of waking bliss," which they could scarcely imagine to exist in the heartless bustle of a city life, and which they would not have exchanged for any other station however exalted. They truly felt that

"God made the country and man made the town.
What wonder then that health and virtue, gifts
That can alone make sweet the bitter draught
That life holds out to all, should most abound
And least be threatened in the fields and groves!"

This is no fancy sketch. There are thousands, who are surrounded by all the luxuries and elegances of life, and calculated to shine in any sphere, and who have feelings and tastes refined enough to enjoy the only truly independent life—that of a man, who owning and cultivating the soil he stands upon, and unshackled by ceremony, except such as good feeling and unselfish habits produce, feels that he is free, and blesses God that he is so. The charms and the pleasures of a country life cannot be enumerated, were volumes filled with the catalogue. Who has ever seen a snow storm without being entranced by its beauty? How noiselessly the feathery flakes descend, and cover with the mantle of purity, all that was dark and barren in the prospect. How exquisite the fairy frostwork on every spray; and when the tempest has sighed itself to sleep, how beautiful and delicate the long drifts on the fields and hill sides, curling over with their own weight like waves of the sea, and taking in their shadowy curves, the same green hue; or settling in heavy masses on the evergreens, and weighing them down in graceful sweeps, as they stand out in bold relief from the dark background. Then the merry sleigh bell; the gay parties; the pleasant visits to far off friends; and it is so invigorating, after being shut up during the storm, to feel the pure healthful air rushing past, as one is borne rapidly along over the smooth white roads.

But then comes a thaw, followed by a cold driving rain that freezes as it falls, encrusting every object with its icy robes. The sheets of water dashing against the windows almost obscure the light of day; everything without is bleak and dreary, and within doors no one wishes to venture beyond the precincts of a blazing fire. All are glad to betake themselves to early rest, to sleep away the cheerless hours, feeling as if an air of gloom pervaded even the snug bedrooms. Morning steals upon them calm and bright, as if the wind had never learned to blow, and with the rising sun such a scene of inimitable splendor bursts upon their sight, as they had not dreamed of. The *Storm King* had been abroad, and all nature, to do him honor, is dressed in his gorgeous livery of robes embroidered with living gems; the meanest slaves in his train, the withered herbage and dry sticks, are decked in an array of jewels that the proudest earth-born monarch might envy. His sceptre is some tall pine, each twig and leaf glittering with diamonds of the purest lustre, multiplied indefinitely by the passing breeze which shakes them off with lavish profusion as it bends its majestic head, as if in mock reverence to the delighted beholder; his throne is a rock-crested hill top, robed in ice, from whence comes crashing down with deafening noise, some rough crag, or huge tree, the patriarch of the forest, that, after resisting the tempests of centuries, at last in its old age, too proud to bend, yields to a storm less mighty than hundreds that have preceded it. The garden in which Aladdin was so cruelly immersed by the wicked magician, where the fruit was rubies, topazes, and sapphires, and the leaves of the trees were emeralds, never, even in my childish fancy, rivalled the glories of sunrise after an ice storm. Who ever witnessed this scene of exquisite splendor without feeling what has been so beautifully said by Nature's truest poet,

"Is winter hideous in a garb like this?"

E. S.

MILKING.—I don't know anything about which folks are so careless in the winter, or that is more disagreeable to us women, than the manner in which the milking is done. Many farmers do not bed their cows at all, and the consequence is, they lie down in their filth, and get up in the morning with bags too shocking to look at. Set a boy or man then to milking, and nine out of ten will not half clean the cow's bag before they commence; so the dirt falls into the pail, and by the time they have finished stripping the cow, the milk is a nasty mess indeed!—hardly fit to give a pig, much more to be brought into a decent dairy. Pah! it makes me sick to think of the thing! Who would drink it if they knew this? or use it in any cooking? or make butter from it? If it was not for being called a scold, or a Mrs. Caudle, I would say I wish the men who treated cows so, had their own faces daubed every morning—I won't add in what.

If milk you'd have both clean and sweet,
Each night before you rest your feet,
Make for your cows a straw-bed neat.

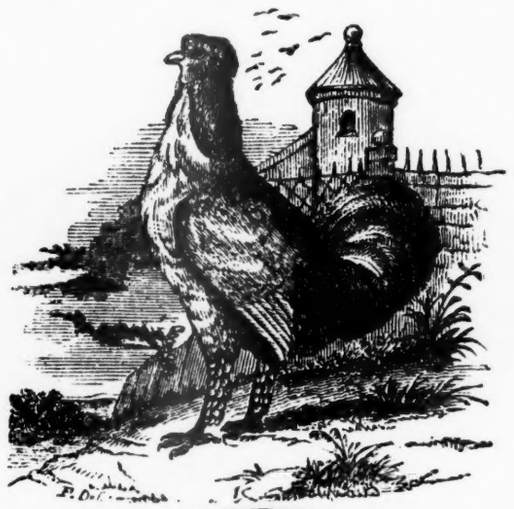
DOLLY HOMESPUN.

MAKING STOCKING YARN.—Many has been the time that my mother has come to me, saying, "Johnny, get off the dye-tub," when comfortably seated upon it in the corner of the old stone chimney, drying my stockings, after a day spent in sledding wood on a Saturday, or during school vacation. Yes, the old dye-tub stood in the corner twenty-four years ago; and when I went home last November, there it stood, as if it had never been moved since I left. It holds precisely seven gallons, and when a fresh dye is to be set, it is filled two-thirds full of chamber ley, with six ounces of best Spanish-float indigo, put into a small bag, made of cotton cloth, tied up and thrown in for the dyeing. Here it lies in the liquor which is kept at a moderate heat, for several days, when the indigo is squeezed gently with the hand, and the wool then put in, and occasionally stirred and examined from day to day, until the color suits. The wool is now taken out of the liquor, and wrung clean of it, and then put out to dry, after which it is mixed—one part a beautiful, deep indigo blue, and two parts white wool. Next it is carded at the factory, and then spun on a hand wheel in my mother's old kitchen, and thus girls are never out of knitting-yarn from one year's end to the other. JOHN DOLITTLE.

Boys' Department.

SILKY FOWL.—Fig. 6.

Here, boys, you have a funny looking fellow, indeed. Mr. Bement, in his Poulterer's Companion, says, "This bird, by modern writers, is considered a species, rather than a variety. It is of good size, and the whole body is covered with feathers, the webs of which are disunited somewhat in the manner of some of the feathers of the ostrich and the peacock, and appear some like hairs and glossy silk. The legs are covered on the outside to the toes. Individuals of this sort differ in respect to color, as in other varieties; some are pure white, and others of a dingy-brown; and all of them with dark-colored legs, nor are the legs always feathered. This bird is indigenous in Japan, where it is much prized, and is also found in China, where they are frequently offered in cages for sale to the Europeans. The skin and bones are said to be black, which gives it, when cooked, an unfavorable appearance, on which account it is in disrepute."



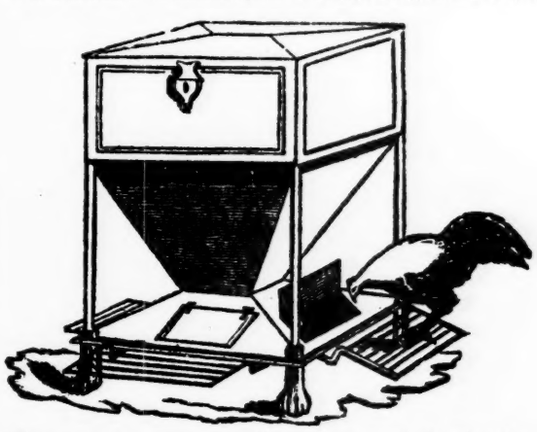
A CHAPTER ON GRASSES.—No 1:

Things which Farmers' Boys ought to know.—Among the many things which farmers' boys should be familiar with, not the least important appears to be a knowledge of the names, properties, and uses, of the plants they cultivate; for why should they, with eyes to see, and understandings to comprehend the wonderful variety and beauty of the vegetable creation, which comes under their daily notice, be as ignorant of their nature as the animals for whose use they are planted and gathered? It is a bold assertion, but perhaps not far from the truth, that farming is rapidly advancing to the rank of a *science;* but if it is ever to be so considered, it must be by farmers becoming acquainted with those sciences, without whose aid they can never hope to be more than mere tillers of the soil. At the head of these are chemistry, mineralogy, and botany. If my very humble efforts in these numbers to awaken an interest in the pursuit of natural science among the younger members of the agricultural community are crowned with the least success, and tend to induce some one better qualified for the task to continue what I have begun, I shall have reason to feel peculiarly gratified.

Of the natural Order *Gramineæ*, or true grasses, there are believed to be about 2,000 species, or nearly one-twentieth part of the whole number of flowering plants, known at present to botanists. Of these a large proportion are, directly or indirectly, useful to man; and the almost universal distribution of grasses wherever the human foot has trod, seems to warrant the assertion, that they are the most important of any known tribe of plants—if not more so than all other groups of vegetable productions; the nutritious herbage, and the farinaceous albumen of the seeds, constituting the chief support of man, and the herbivorous animals, whether domesticated, or left free to be hunted at will, for food or raiment. Generally humble in appearance, and low in stature—seldom rising more than a few feet from the ground—there is little to remind one of their vast importance in the scale of organized creation—the bamboos, and a few other tropical species, alone rising to the height of trees. They grow in every soil and climate—on land and in water—in the torrid zone, and the frozen wastes of Spitzbergen—and on the rocky declivities of our northern Andes, they flourish, almost on the confines of the region of eternal snow. Under the equator they grow, like other plants, singly, or nearly so; while in the temperate climes of the northern hemisphere, they cover vast districts, to the almost total exclusion of every other species of vegetation.

My subject being slightly scientific, I shall write in very short chapters, for fear of tiring the boys with dry matter and hard names, so this will do for the present. In my next I shall explain what *true grass* is, and give some account of its different varieties. My articles will require some study from the boys; but inasmuch as I intend to make them *very wise* on these matters before we get through, I hope they will bear it patiently, and continue with me to the end. M. G.

POULTRY FEEDING FOUNTAIN.—Fig. 7.



Nothing is more neglected in their food and drink, at this season of the year, than the poultry. Too many farmers leave their fowls to pick up a scanty existence from the dung-heap; and, as for water, they do not think of providing it at all, though all the ponds and aqueducts may be frozen up, rendering it impossible for the poor birds to get a drop to quench their burning thirst; for thirst they have in winter as well as summer—just as much, boys, as you. This cut will be explained in our next.

FOREIGN AGRICULTURAL NEWS.

By the steam-ship Acadia, we are in receipt of our foreign journals to December 4th.

MARKETS.—*Ashes* were in limited demand. *Cotton* much depressed, and a further reduction of ¼d. per lb. has taken place. The stock on hand at Liverpool on the 1st Dec. was 926,000 bales, against 786,000 same time last year. It is within ¼d. as low now as it was ever known. *Flour* has undergone a decided decline. *Beef*, little alteration. *Pork*, dull. *Cheese*, a slight decline, but a good demand. *Naval Stores.* The sales in these were large, and at good prices. *Rice and Tallow*, nothing particularly worthy of notice. *Tobacco* firm with an upward tendency. *Wool* did not go off well at the late sale, most of it being put up in a very slovenly and imperfect manner. We must pay more attention to this matter if we wish to command fair prices in the British market.

Money was in good demand, and a further advance of the rate of interest is anticipated. From 3 to 5 per cent. was asked.

Trade in the manufacturing districts was dull, and undergoing curtailment.

Failure of the Potato Crop.—The accounts of the failure of this crop are so fluctuating that we can hardly give an opinion respecting it. There is no doubt, however, that the loss has been grossly and wickedly exaggerated, for the purpose of aiding speculators. We may say the same of wheat and other products.

Emigration to the United States.—Great preparations are making in Germany and Switzerland to emigrate to America the coming season. Food is scarce and high there; besides, the people being much persecuted for their religious opinions, desire to live where they can choose their own road to Heaven, and have plenty to eat while travelling thither.

Professor Liebig's Opinion on the Potato Disease.—The researches I have undertaken upon the sound and diseased potatoes of the present year have disclosed to me the remarkable fact, that they contain in the sap a considerable quantity of vegetable casein (cheese) precipitable by acids. This constituent I did not observe in my previous researches. It would thus appear that, from the influence of the weather, or generally speaking, from atmospheric causes, a part of the vegetable albumen which prevails in the potato has become converted into vegetable casein. The great instability of this last substance is well known, hence the facility with which the potato containing it undergoes putrefaction. Any injury to health from the use of these potatoes is out of the question, and nowhere in Germany has such an effect been observed. In the diseased potato no *solanin* can be discovered. It may be of some use to call attention to the fact that diseased potatoes may easily, and at very little expense, be kept for a length of time, and afterwards employed in various ways, by cutting them into slices, of about a quarter of an inch thick, and immersing them in water, containing from two to three per cent. of sulphuric acid. After twenty-four or thirty-six hours, the acid liquor may be drawn off, and all remains of it washed away by steeping in successive portions of fresh water. Treated in this manner, the potatoes are easily dried. The pieces are white and of little weight, and can be ground to flour and baked into bread along with the flour of wheat. I think it probable that the diseased potatoes, after being sliced and kept for some time in contact with weak sulphuric acid, so as to be penetrated by the acid, may be preserved in that state in pits. But further experiments are necessary to determine this. It is certain, however, that dilute sulphuric acid stops the progress of putrefaction.

Protection of Tender Roses.—One of the best plans consists in pegging the shoots close to the ground, after the bloom is destroyed in the autumn, and afterwards covering them with spruce branches, fern, or any dry litter that may be at hand. This is laid on very thinly, barely sufficient to hide the branches, and yet, although we had the thermometer at zero last winter, I did not lose a single plant, not even among the Fairy Roses, which many of the rose growers experience great difficulty in preserving in well-protected pits and frames. My roses are planted in an exposed situation, on a rather retentive soil, so they have no local advantages. They have been in excellent bloom from the middle of May up to the end of October; and really I do not know a more interesting appendage to a garden than a few beds of these perpetual blooming favorites.—*Gar. Chron.*

Keeping Fruit.—Numerous inquiries having, from time to time, been made relative to the best methods of preserving apples and pears during winter, I will mention one or two particulars necessary in the storing of these, and the kind of house best adapted for securing a prolonged supply. The house, in the first place, should be ventilated in the ceiling, as from the moment of storing until the apple is absolutely decayed, an organic transposition of its parts is constantly going on; therefore it is important to allow the confined air of the room, which becomes highly impregnated with the effluvia, to pass off. Any animal or vegetable substance in a sound state is more liable to become diseased when placed in an atmosphere impregnated with effluvia; but again, on the other hand, it is well known that apples and pears shrivel and lose their flavor when exposed, particularly in spring, to a free admission of external air. This may be attributed not so much to the mere admission of air, as to the increased temperature which the air in spring has attained. The increased heat of the atmosphere then dries up the juices of the apple and destroys its flavor; in fact, fruit so exposed becomes tasteless and tough. Now it appears to me quite necessary to admit air or rather to allow the impure air to pass off quietly at the ceiling without creating a complete current in the house, and to exclude the admission of external air at the doors and windows as much as possible, to keep down the temperature of the room, for on this a great deal depends. Could the same kind of temperature be maintained in spring as during winter, there can be no doubt that fruit would keep much better, and be better flavored. When pears are just arriving at perfection, they may be greatly improved in flavor by being placed in a warm room for a few days before they are eaten. The increased temperature promotes more rapidly and perfectly the transposition of the juices into the saccharine state.

Air Churn.—The Bishop of Derry has invented an atmospheric churn. Instead of the present unscientific mode of making butter by churning, his lordship accomplishes this measure by the simpler manner of forcing a full current of atmospheric air through the cream by means of an exceedingly well-devised forcing pump. The air passes through a glass tube connected with the air-pump, descending nearly to the bottom of the churn. The churn is of tin, and fits into another tin cylinder, provided with a funnel and stop-cock, so as to heat the cream to the necessary temperature. The pump is worked by means of a winch, which is not so laborious as the usual churn. Independently of the happy application of science to this important department of domestic economy, in a practical point of view it is extremely valuable. The milk is not moved by a dasher, as in the common churn; but the oxygen of the atmosphere is brought into close contact with the cream, so as to effect a full combination of the butyracious part, and to convert it all into butter. On one occasion the churning was carried on for the space of 1 hour and 45 minutes, and 11 gallons of cream produced 26 lbs. of butter.—*Globe.*

Editor's Table.

An Essay upon the Wheat Fly, and some Species Allied to it. By Asa Fitch, M. D., pp. 32, octavo, with a colored engraving of eight figures.—We hail this pamphlet as another evidence of the gradual advancement of an improved agriculture with the public mind. Dr. Fitch seems to have treated the subject of the Wheat Fly and the species resembling it, with sufficient minuteness, and gives us a more clear and definite idea of its history, habits, and the means of arresting its ravages than we have yet met with. We hope his work will have an extensive circulation among the farmers; as it might be the means of leading many of them to habits of observation of insects, which would hereafter greatly benefit the community. We wish the State Ag. Society would purchase the copyright of this pamphlet from the author, and issue a large edition for distribution among the County Societies. We are much obliged for the copy sent us.

The History of Silk, Cotton, Linen, Wool, and other Fibrous Substances; Including observations on Spinning, Dying and Weaving. Also, an account of the Pastoral Life of the Ancients, their Social State and Attainments in the Domestic Arts—Illustrated by Steel Engravings, pp. 464, octavo. Harper & Brothers, New York.—We have looked through this highly curious and useful book with much pleasure, and find it condenses a mass of information on the subjects of which it treats, which one might seek in vain for in an extensive library. In comparing the agriculture and manufactures of ancient times with those of our own day, we find that very many, even in the most humble circumstances, are enjoying, in their daily food and raiment, what princes might have formerly coveted in vain. This History, of the Messrs. Harper, is a beautiful work for holiday presents among the industrial classes, and we recommend it to Agricultural Societies in making up their assortment of books for premiums to be distributed at their annual meetings.

The Artist, The Merchant, and The Statesman, Of the age of the Medici and of our own Times. In two volumes. By C. Edwards Lester. Price $1 25. Paine & Burgess, 67 John St.—These volumes under review, are devoted to the Autobiography of Powers, the American Sculptor, whose inimitable works have already placed him higher in the niche of fame than any other artist of ancient or modern times. Hiram Powers is a man of *power*—a wonderful creature of instinctive genius, and with modesty equal to his worth. The world is sounding with praises of his statues of the human form divine; but if we can ever see him, we intend to get him to chisel a horse, an ox, and some other domestic animals. The son of a Vermont farmer, he is just the man for this; nor will it lessen his dignity to do works of this kind. Many are the anecdotes we have heard of Powers from his associates; all these, and a thousand more, has Mr. Lester given us in this autobiography, clothed in his usual racy, slapdash style. This will be a very popular book; every American ought to read it, old or young—it will make them proud of their countryman, proud of their country, and give them an inkling of the fame that ultimately awaits us, as a nation, in the fine arts. Europeans will now cease their sneers. These volumes are embellished with portraits of Powers and Americus Vespucius.

Fire Proof Safes.—Our readers are referred to the advertisement of Salamander Safes. We have examined them thoroughly, and believe them to be a superior article, highly desirable to preserve money, plate, jewelry, and valuable papers from fire and burglars. Planters and farmers doing much business ought to be provided with them. We have one for exhibition at our warehouse, and will receive orders for them of any required size.

The Youth's Cabinet.—This is a beautiful monthly periodical, of 32 pages, octavo. Price $1 a year. It is got up something in the style of the Penny Magazine, and is highly deserving the patronage of the public. Saxton & Miles, publishers, 205 Broadway, New York.

Address upon Insects Injurious to Vegetation. By Noyes Darling.—This Address was delivered before the New Haven Horticultural and Agricultural Societies, at their late meeting in October, and is published in the Transactions of the Society for the year 1845. Mr. Darling has been long and favorably known as a writer on Insects, and his Address is deserving an attentive perusal. The little creatures do infinite mischief, and the best means of extirpating them and guarding against their ravages ought to be carefully studied by all agriculturists.

The Wheat Crop of 1845.—The wheat crop of the United States for this year, is estimated at 125,000,000 of bushels. The wheat crop of 1842, which was the largest ever previously raised in this country, was 103,000,000. The increase of 22,000,000 shows not less the large additional amount of land brought under cultivation than the genial character of the last summer. The crop of Michigan is comparatively larger than that of any other State in the Union. With a population of not over 400,000, she raises this year at least 7,000,000 bushels of wheat. The quality is also of the very best.—*Albany Argus.*

The Mysteries of Tobacco. By the Rev. Benjamin J. Lane. Wiley & Putnam. Price 37½ cents. Our readers are pretty well aware of our utter detestation of this nasty and odious weed. How any one can use it in any shape or form is utterly incomprehensible to us. This treatise shows its filthiness and injurious tendencies, in a very full and complete manner. We wish it could be placed in the hands of every head of a family in the United States; we should then hope for some reform in the use of this vile weed. Tobacco is the direct cause of insanity, and many other diseases too fearful to mention. If any one doubts this, let him read the opinions of the most eminent German physicians, the country where tobacco is more universally used, and especially in the way of snuffing and smoking, than any other.

Acknowledgments.—To Hon. W. L. Goggin, President, for his Address before the New London, Va., Ag. Society; to an unknown friend, for the Address of the Hon. Josiah Quincy, Jr., at the late Show of the N. Y. State Ag. Society.

Road Horses.—We desire to call attention to the superior horses advertised in this paper. Such animals are rare, and especially at the prices offered. They would be of great value in any breeding stud for roadsters.

Dorking Fowls.—We would inform the numerous applicants for these fowls, that no orders can be supplied before next fall. The price will uniformly be $5 per pair.

To Correspondents.—John B. Miller, Thomas Affleck, B. L. C. Wailes, Philetus Philips, Wm. Partridge, John P. Norton, Coke, M. W. Philips, S. H. R., Solon Robinson, and A Constant Reader are received. We cannot agree with the latter in his opinion of the African maize. It has been frequently noticed in this Journal, through the N. Y. Farmers' Club.

To a Subscriber.—The common kind of salt, such as can be purchased from 20 to 25 cents per bushel, is the kind used for agricultural purposes. The part of the cargo lying on the ship's bottom, sometimes gets quite dirty, and may then be had at a still lower price.

REVIEW OF THE MARKET.

PRICES CURRENT IN NEW YORK, DECEMBER 24, 1845.

ASHES, Pots,	per 100 lbs.	$3 87½	to	$3 94
Pearls,	do.	4 12½	"	4 19
BALE ROPE,	lb.	5	"	7
BARK, Quercitron,	ton,	26 00	"	26 50
BEANS, White,	bush.	1 12	"	1 25
BEESWAX, Am. Yellow,	lb.	28	"	33
BOLT ROPE,	do.	12	"	13
BONES, ground,	bush.	40	"	55
BRISTLES, American,	lb.	25	"	65
BUTTER, Table,	do.	16	"	25
Shipping,	do.	9	"	13
CANDLES, Mould, Tallow,	do.	9	"	11
Sperm,	do.	25	"	38
Stearine,	do.	20	"	25
CHEESE,	do.	5	"	10
COAL, Anthracite,	2000 lbs.	5 00	"	6 00
CORDAGE, American,	lb.	11	"	12
COTTON,	do.	6	"	10
COTTON BAGGING, Amer. hemp,	yard,	13	"	14
Kentucky	do.	12	"	13
FEATHERS,	lb.	26	"	34
FLAX, American,	do.	7	"	8
FLOUR, Northern and Western,	bbl.	5 50	"	5 87
Fancy,	do.	6 50	"	6 87
Southern,	do.	5 50	"	5 87
Richmond City Mills,	do.	7 00	"	7 25
Rye,	do.	4 25	"	4 38
GRAIN—Wheat, Western,	bush.	1 20	"	1 25
Southern,	do.	1 15	"	1 25
Rye,	do.	80	"	81
Corn, Northern,	do.	80	"	83
Southern,	do.	73	"	75
Barley,	do.	65	"	67
Oats, Northern,	do.	46	"	47
Southern,	do.	38	"	40
GUANO,	100 lbs.	2 25	"	3 00
HAY, in bales,	do.	95	"	100
HEMP, Russia, clean,	ton,	180 00	"	190 00
American, water-rotted,	do.	105 00	"	185 00
American, dew-rotted,	do.	75 00	"	125 00
HIDES, Dry Southern,	lb.	8	"	10
HOPS,	lb.	20	"	35
HORNS,	100.	1 00	"	7 00
LEAD,	lb.	4 75	"	4 88
Sheet and bar	do.	4¾	"	5¼
MEAL, Corn,	bbl.	4 25	"	4 37
Corn, hhd.		18 00	"	18 25
MOLASSES, New Orleans,	gal.	23	"	29
MUSTARD, American,	lb.	16	"	31
NAVAL STORES—Tar,	bbl.	2 12	"	2 25
Pitch,	do	1 25	"	1 38
Rosin	do.	1 00	"	1 25
Turpentine,	do.	3 50	"	5 00
Spirits Turpentine, Southern,	gal.	63	"	75
OIL, Linseed, American,	do.	67	"	68
Castor,	do.	57	"	68
Lard,	do.	70	"	75
OIL CAKE,	100 lbs.	1 75	"	1 88
PEAS, Field,	bush.	1 50	"	2 00
PLASTER OF PARIS,	ton.	2 50	"	2 62
Ground, in bbls.,	of 300 lbs.	1 12	"	1 25
PROVISIONS—Beef, Mess,	bbl.	7 00	"	9 00
Prime,	do.	4 50	"	5 50
Smoked,	lb.	6	"	9
Rounds, in pickle,	do.	4	"	6
Pork, Mess,	bbl.	12 00	"	14 12
Prime,	do.	9 00	"	11 00
Lard,	lb.	8	"	8¾
Bacon sides, Smoked,	do.	3	"	4
In pickle,	do.	3	"	4
Hams, Smoked,	do.	6	"	10
Pickled,	do.	4	"	7
Shoulders, Smoked,	do.	5	"	6½
Pickled,	do.	4½	"	5
RICE,	100 lbs.	4 25	"	5 25
SALT,	sack,	1 35	"	1 40
Common,	bush.	20	"	35
SEEDS—Clover,	lb.	10	"	11
Timothy,	7 bush.	14 50	"	21 00
Flax, rough,	do.	10 00	"	10 50
clean,	do.	11 00	"	11 50
SODA, Ash, cont'g 80 per cent. soda,	lb.	3	"	3
Sulphate Soda, ground,	do.	1	"	—
SUGAR, New Orleans,	do.	5	"	8
SUMAC, American,	ton,	35 00	"	37 50
TALLOW,	lb.	7	"	8
TOBACCO	do.	3	"	7
WHISKEY, American,	gal.	25	"	27
WOOL, Saxony,	lb.	35	"	50
Merino,	do.	30	"	35
Half-blood,	do.	25	"	30
Common,	do	20	"	22

NEW YORK CATTLE MARKET—Dec. 22.

At Market, 1300 Beef Cattle (350 from the South), 75 Cows and Calves, and 2500 Sheep and Lambs.

PRICES.—Beef Cattle—An active demand has prevailed, during the week, without, however, any material variation in price, which, for inferior and middling qualities, may be quoted at $4.50a$5.00 and $5.50 and $6.25 for good and prime; though a small lot on Saturday, brought $6.50. 200 left over.

COWS AND CALVES.—All at market taken at prices ranging according to quality, from $15 to $30.

SHEEP AND LAMBS.—We quote $1 25a$3.50. A few extra at $6. All sold.

LOOSE HAY—Is held at $1.12½ and considerable sales making.

REMARKS.—*Ashes* quiet. *Cotton* is dull at a reduction of ¼ of a cent per lb. Export since 1st September last, 328,698 bales; same time last year, 377,768; same time year before, 209,580. *Flour* dull, at a great reduction of prices. The large advance last month was totally unjustified, and was got up mainly by a combination of speculators on both sides of the water. *Wheat* and most kinds of grain have fallen, but are in good demand. *Hay* brisk. *Naval Stores* firm. *Provisions* of all kinds in fair request. *Molasses*, *Sugar*, *Rice*, and *Tobacco*, little change. *Wool* rather stagnant.

Money continues scarce, and is difficult to be had at legal rates except on the best paper.

Stocks much depressed on account of the Oregon WAR—*videlicet*—the political humbug and terror of the day.

The Weather for most of the month has been of the snug winter kind. Such late crops as have remained out at the south have been well husbanded, and the year's business on the whole may be considered highly advantageous to the Farmer and Planter.

TRANSACTIONS OF THE N. Y. STATE AG. SOCIETY.—The answer of "A Member" to an article in the December No. of the Cultivator came to hand too late for the January No.; I have therefore issued it in an Extra, published by myself. I respectfully call the attention of all candid persons to it, as the writer makes out a strong case against the editor of the Cultivator on one point. What he will have to say on others I have no means of knowing. By his request I have issued a large edition that his friends can have it *gratis, in any quantity, for distribution.* I recommend their circulating it extensively in every direction, the more especially since myself and Saxton & Miles have become the innocent victims of vexatious suits, simply because I *dare* to be INDEPENDENT and HONORABLE in my conduct. A. B. ALLEN.

CHEAP PLOWS FOR THE SOUTH.

These plows are made in a far superior manner to any of the same kind ever sent from this market. The woods are of well selected white oak, and got out by Patent Machinery, and are all exactly alike, so that if one part wears out, or gets broken, it can be instantly replaced by a duplicate. It is the same also with the iron parts. The whole material of these plows is warranted of a superior kind.

Price of No. 10½ Plow	$2.00
" 11½ do	2.25
" Corn Plow	2.50
" No. 19½	4.50
" No. 20	4.50
" J. M. & Co. No. 2, with coulter	3.50
" " 3, do	4.50
" " 4, do	5.00

A liberal discount from the above prices to dealers.

A. B. ALLEN, 187 Water Street, N. Y.

AGENTS FOR THE AMERICAN AGRICULTURIST.

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Milwaukie, Wis. Ter	Hale & Hopkins.
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Bound volumes can be obtained of any of our Agents at $1.25 per volume.

GENUINE EAGLE PLOWS.

The subscriber is sole Agent in this city for these celebrated plows, and any one else pretending to keep them has only a miserable imitation; the public, therefore, are cautioned to be on their guard against deception. The following brief abstract from the circular of the manufacturers, Messrs. Ruggles, Nourse & Mason, will give some idea of the public estimation of their merits.

In each year, 1842 and 1843, the Agricultural Society of Essex County, Mass., offered premiums for the best plows, and instituted full investigation and trials, which resulted each year, in awarding to Ruggles, Nourse & Mason, the highest premium. The judging Committee for 1843, in their printed Report, say, "our attention was called to the quality of the castings on the plows of Ruggles & Co., their finish and durability. Their appearance is certainly more perfect than anything we have elsewhere seen. The process of chilling the point, the entire edge of the share and flange or base of the landside, gives a permanence and durability to the work that renders it of a decidedly superior character," "and we think there is no hazard in saying, that the value of the parts thus made, is more than doubled by the process."

The following Table shows the number of premiums awarded to competitors contending for the prizes before the several different societies named, and the number awarded to those who used plows made by Ruggles, Nourse, & Mason.

Name of Society.	*Year.*	*No. of prem's offered.*	*No. of premiums awarded as above.*
Essex County, Mass.,	1843	10 premiums,	9 premiums,
do do do	1844	8 do	6 do
do do do	1845	11 do	11 do
Middlesex do do	1843	8 do	5 do
do do do	1844	8 do	5 do
do do do	1845	8 do	6 do
Wor'ster do do	1840	9 do	9 do
do do do	1841	9 do	9 do
do do do	1842	9 do	9 do
do do do	1843	12 do	12 do
do do do	1844	11 do	7 do
do do do	1845	10 do	8 do
Plymouth do do	1844	6 do	6 do
do do do	1845	7 do	4 do
Bristol do do	1845	11 do	7 do
Hampden do do	1844	3 do	2 do
do do do	1845	6 do	3 do
Berkshire do do	1845	8 do	7 do
Barnstable do	1845	4 do	3 do
Hartford do Conn.,	1845	3 do	3 do
Windham do Vt.,	1845	4 do	2 do
Dutchess do N.Y.,	1845	the highest.	the highest.

It is but just to remark that the competition was as great between the different plow-makers as between the plowmen; and, in most instances, noted, the plows above-named were strongly contested by Prouty & Mears' (so called) "Centre Draught," Martin's imitation of our "Eagle" plows, and that in *every case*, the first premiums were awarded to plowmen, who performed their work with plows made by Ruggles, Nourse & Mason.

A. B. ALLEN, 187 Water Street, N. Y.

DAVISON'S PATENT PROCESS FOR CURING MEAT.

The undersigned is authorized by the patentees to sell patents for the using and sale of Davison's Apparatus for Curing Meats; and preserving timber; and also for the sale of rights for States. The nature of the apparatus may be learned from the article page 28 in this number of the Agriculturist. By this process, all kinds of meat can be perfectly cured in twelve hours, and in warm weather as well as cold. It leaves all the juices in the meat, and of course it makes a better article; bacon cured in it may be put to smoke in two days. It is just such an article as every planter in the South should have. Application for rights and for single machines may be made to the subscriber. The price of the machines is from $75 to $300, according to size.

A. B. ALLEN, 187 Water Street, N.Y.

PERUVIAN GUANO.

The subscriber keeps this excellent fertilizer constantly on hand for sale, in bags or barrels. It comes direct from the agent of the Peruvian Company, and is warranted genuine and of a first rate quality.

Price for five tons or more.....2¼ cents per lb.
" one to five tons.....2½ do.
" half a ton to one ton.....2¾ do.
" less than half a ton.....3 do.

A. B. ALLEN, 187 Water Street.

NEWFOUNDLAND PUPS.

One now seven weeks old, black, except a small spot of white on the breast. Also, a litter deliverable the middle of February to the 1st of March. These pups are from imported stock, direct from Newfoundland, unequalled in the United States. The sire of them weighs 143 lbs. Those who wish to secure one should apply immediately to the EDITOR OF THIS PAPER.

SMITH'S PATENT SEPARATING CORN SHELLER.

For which was awarded by the American Institute, New York, a Silver Medal.

From recent and extended operations in the trials of these machines at the South, as well as the decisions of scientific and reputable individuals from various and remote parts, the proprietors are now in possession of the most conclusive evidence that this machine not only stands unrivalled, but that its arrangement will ever remain the climax of improvement in Corn Shellers. In the further support of which, the following additional facts are respectfully submitted, viz.:—Its structure is simple and compact; of strong and durable materials; is easy of transportation; safe in its operation against accident; is adapted to all the various kinds of corn, whether damp or dry; receives the ears promiscuously from the shovel, basket, or crib; breaks neither the corn nor the cobs; is readily attached to any horse or other power (being simply driven by belt or rope); operates in the double capacity of sheller and separater, doing its work perfectly clean, and at the rate of from one hundred to one hundred and fifty bushels per hour.

In the manufacture of these machines, the parties concerned have spared neither pains nor expense in the establishment of that system which would produce an article of the greatest utility, accompanied with least expense. The machine in its present and improved style is respectfully submitted as evidence of success; and the proprietors only ask of the public a careful investigation, and they will cheerfully abide the result.

In regard to a fixed and uniform price, on which there has been no settled arrangement, the proprietors now have the satisfaction to state that the mode of manufacture has become firmly established, and the price per machine will uniformly be Fifty Dollars.

F. N. SMITH, Patentee.

Samuel Hanna, proprietor for the States of New York and New Jersey, and general agent for the Atlantic States.

The subscriber having become sole manufacturer of the above machine, is now prepared to supply orders, and will forward at the established price. Apply to

SAMUEL HANNA, Valatia, Kinderhook, N. Y.
A. B. ALLEN, Agent, 187 Water Street, N. Y.
T. B. WHEELER, Travelling Agent for the Southern States.

FIRE PROOF SAFES.

Gayler's Double Salamander Book Safes, warranted Fire Proof. Single Salamander Safes, equal, if not superior, to any made.

C. J. Gayler's Double Salamander, is the only Safe yet invented which is, beyond doubt, proof against the action of fire, strong enough to endure a fall from the third story of a building, with locks to each door of the best quality, which will defeat the attempts of burglars. This really fire proof article is constructed so as to combine two perfect iron safes, one within the other, each being made of wrought bar and plate iron, and lined between with the most perfect non-conducting and indestructible substances.

Those who are in want of an article that will afford sure protection, are invited to examine an assortment of the double and single Salamander Safes. Safes made, Book-cases, and any lock required, fitted to order.

LEONARD BROWN, 80 Wall Street.

One of these Safes can be seen at my warehouse where orders will be received. A. B. ALLEN, 187 Water St., N. Y.

FASTOLFF RASPBERRY.

The Subscriber has just received a fresh supply of the above valuable Raspberry, esteemed in England superior to all other varieties. The fruit is very large, of rich flavor, and bears abundantly. They are ready for delivery as follows:

Package containing 25 canes, $2. Containing 12 canes, $5.
Single canes, 50 cents. These are warranted true to name.
Also for sale, a choice collection of green-house and stove plants.
Orders addressed to the undersigned will receive attention, and from unknown applicants a remittance or satisfactory reference is required. JACOB R. VALK.

Horticultural Gardens, Flushing, L. I., N.Y., January 1, 1846.

A SUPERIOR STALLION.

A thorough-bred stallion for sale, of a fashionable pedigree; five years old; of a blood bay; black legs, mane, and tail, and without white. He stands 15¼ hands high, and will weigh 1,100 lbs. He has won several races, and is a *superb trotter*, going level in his pace. He is perfectly sound; kind in temper; possesses great style, and would have made a capital roadster. He has two crosses in him, of the famous imported Messenger, and may be depended on to get first-rate roadsters. His price is $400, which is extremely low for him. He would have brought $1,200 easily three years ago, but his owner having no further use for him is desirous of selling.

Also for sale a road stallion 16 hands high, and four years old, of a bay color and fine style. Price $400. Apply to

A. B. ALLEN, 187 Water Street.

HOLIDAY PRESENTS.

The elegant bound volumes of the American Agriculturist are the best Holiday Presents the Farmer and Planter can give their families and friends.

AGRICULTURAL WAREHOUSE.

THE Subscriber keeps constantly on hand the best and most complete assortment of Agricultural Implements, Field Seeds, and Fertilizers, to be found in the city. A few of the articles he enumerates below, viz. :—

Plows.—Cotton, Rice, and Sugar Plows,.....$2.00 to 4.50

Some of these plows are made expressly for light sandy soils, others for a loam or stiff clay, which they work in the best manner. Being made by patent machinery, they are superior to anything of the kind ever before sold in this market.

One-horse Plows for the North, with single and double mould boards. These last are admirable to work in between the rows of root crops and corn, when not over 3½ feet apart, as they turn the furrow both ways to the crop at once, thus doing double the work of a single mould board.....3.00 to 5.00

Rice Trenching Plow. This does the same work as the hands perform on a rice plantation with trenching hoes, and equally as well, and with five times the rapidity that a negro can work. No rice planter should be without them.....6.00 to 6.50

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